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ABSTRACT

The second year of the Indiana University (IU) Advance College Project (ACP), a cooperative program between IU and selected high schools within the State of Indiana was evaluated. The Project offers college credit to high school seniors who enroll in IU freshman courses offered at their home high schools. The purposes of the IU/ACP evaluation activities have been to facilitate project implementation by identifying strengths and weaknesses and documenting events within each high school; to assess how well IU's course standards are being met for each ACP/IU (Bloomington) course as it is taught within each high school; to assess the impact of the Project upon its various participants; and to establish a base line of data for the Project for later assessment of longitudinal trends. Students' and teachers' perceptions of the program were discussed. Appendices include ACP Student Questionnaire; Sample Course Evaluation Form; Sample Teacher Interview; and ACP Final Exam Administration Questionnaire. (DWH)

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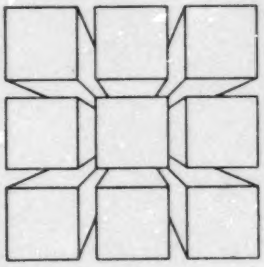

Evaluation Report

ADVANCE COLLEGE PROJECT
FINAL EVALUATION REPORT
1983-84 School Year

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Indiana University Bloomington
Office of Summer Sessions
Advance College Project
Evaluation Report

ADVANCE COLLEGE PROJECT
FINAL EVALUATION REPORT
1983-84 School Year

Prepared by Janice Lave
Director of Research & Evaluation
Advance College Project
October 1984

Executive Summary: 1983-1984 Advance College Project Evaluation

The evaluation of the Advance College Project has generated a substantial amount of information concerning the implementation of the Project. The findings listed here are not meant to be a substitute for the final report but merely a synthesis of some of the general findings of the Project.

General Project Data

1. During the 1983-1984 school year, a total of 453 ACP course enrollments were generated. This produced a total of 1671 Indiana University in-state credit hours.

2. From 453 course enrollments, student questionnaires were received from 89% or 404 students. When asked which factors influenced their decision to enroll in the ACP course, the five factors most frequently cited by students in order of their greatest frequency are listed:

    * To get a heard start in college (N=369, 91%)
    * To earn dual credit (N=306, 76%)
    * To learn what a college course is like (N=200, 49.5%)
    * Expected course to be more individualized in high school (N=191, 47%)
    * To see if I could do college work (N=167, 41%)

3. Contrasting the academic background of the ACP students to the 1983-1984 Indiana University entering freshman class, 61% of the ACP students were in the top 20% of their high school class compared to 50% of the Indiana University Bloomington students. Only 3.5% (N=14) of the ACP students fell below the upper 50% of their class as compared to 5% (N=252) of the Indiana University Bloomington freshman students.

4. Overall, 71% (N=287) of the ACP students indicated that they were "very glad" to have taken an ACP course while 24.5% (N=98) reported that they were "somewhat glad."

5. As a result of taking an ACP course:

    * 54% (N=219) of the students reported that their study habits and time management skills had improved.
    * 75% (N=302) felt that they will have to work harder in college than what they did in high school.
    * 80% (N=332) agreed that they had gained new skills that will be useful in college.
    * 83% (N=334) indicated that they are looking forward to attending college.
    * 89% (N=359) of all ACP students recommended the ACP course that they took.
    * 90% (N=364) recommended that other high school students should be able to take college courses while in high school.

6. IUB/ACP course comparisons were devised for the English W131, Elementary Composition course, Math M215, Analytic Geometry and Calculus, and Chemistry C105/C125, Principles of Chemistry and Lab. Pre and post-test writing samples were collected for English

W131 while the appropriate Indiana University Bloomington course final exam was used for Math M215 and Chemistry C105.

* Because of problems discovered both in the administration of the pre and post writing tasks, a quantitative or holistic assessment could not be completed. Instead, a qualitative approach was used to examine the students' writing.

* Because of lack of comprehensiveness in the design of the Indiana University Chemistry C105 final exam, it was judged not to be a valid assessor of student performance since it lacked content validity. The test items were biased toward the the instruction and examples used in the Indiana University Bloomington class and did not assess student's knowledge in the course's general content.

* On the Math M215 Indiana University final exam, the ACP students average score and the distribution of scores was comparable to the Indiana University Bloomington students enrolled in M215 on campus. The average Indiana University Bloomington math final exam score was 137.3 while the average ACP final exam score was 138.75.

7. Of the 29 high school teachers participating in the ACP, 19 teachers (66%) reported they were "very glad" to be part of the Project, 8 (28%) were "somewhat glad" and only one teacher reported that he was a "little sorry" to be involved.

8. Of the 29 ACP high school teachers, 26 (90%) indicated that the ACP course that they taught was appropriate for the high school students who were enrolled. Of the three dissenting teachers, two felt the course was appropriate for only 1/2 of the students who were enrolled. The other teacher reported having a class that semester with some students lacking maturity.

9. Most teachers (N=25, 86%) reported that the adoption of this Project did not cause any internal problems in their high school. Of the four teachers who did cite problems: two were English W131 teachers who complained of large class size (+30) and that both ACP and non-ACP students were enrolled in the same classroom, and two were Math M215 teachers who complained about the problem of scheduling a 2-hour time block to administer the Indiana University Math M215 final exam. No ACP chemistry teacher reported any problems.

10. Most teachers (N=26, 90%) reported that they were very satisfied with the existing relationship between the high school and university program. Three teachers stated they were somewhat satisfied while none of the teachers indicated they were not satisfied.

11. To date, we know where 92% of the 1982-1983 ACP students spent their freshman year in college. Fifty-three percent (N=140) attended Indiana University Bloomington while another 15% (N=41) attended another Indiana state university. Of the remaining

students, 9% (N=24) attended a private in-state institution, 3% (N=8) were enrolled in an out-state public institution, 8% (N=22) attended an out-state private institution, 4 students joined the military service and 3 students did not attend college.

Of these students (N=242), only 27 students did not transfer their ACP credits, Of the 27, 12 students indicated that the university could not accept the credits while 6 students were not able to transfer due to low course grades. Two students decided to repeat the same course while 3 students reported that they did not know how to transfer credits.

12. Students' and teachers' perceptions toward the specific ACP course are reported in detail. It is recommended that the specific course sections be read in order to sufficiently study the strengths and reported concerns of each ACP course.

13. The overall impressions of both teachers and students toward the the Project and the specific courses has been positive. All participants appear to have benefited from this cooperative articulation program, in particular, the high school students who have enrolled in the ACP courses.

Acknowledgements

There are many people to thank who provided input into the ACP evaluation efforts during the 1983-1984 school year. First to acknowledge should be the ACP teachers who had the patience to administer the ACP/IU student performance measures and several other questionnaires to their students, and who took the time to meet with the ACP staff member(s) for an interview and/or complete an ACP questionnaire(s) that was sent to them.

Next to be acknowledged should be the ACP/IU faculty members who were instrumental in developing or obtaining the student performance measures for their course area. These Indiana University faculty members are Dr. Marilyn Sternglass, English, Dr. Dennis Peters and Dr. Rupert Wentworth, Chemistry and Dr. Grahame Bennett, Math. Jim Anderson, a graduate student in the English department should also be acknowledged for his qualitative study on the ACP writing samples.

The Project's evaluation could not have taken place without having received input from the Project's director, Dr. Leslie Coyne and the Project's assistant director, Dorothy Winkler (1983-1984). Thanks should also be given to Gordon Hay who created a d-base system for the ACP student registration information and to the Indiana University Admissions staff member, Ann Lawver, who provided us with the Indiana University freshman academic data. Last but not least, this evaluation report could not have been written without the word processing support provided by Sherry Shepard, secretary of Advance College Project and the editorial assistance provided by Nancy Lumbley the Project's assistant director (1984-1985). The ACP logo and report cover were designed by Sharon Webber, Summer Sessions' Publications Coordinator.

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Description of the Advance College Project

The Indiana University Advance College Project is a cooperative program between Indiana University and selected high schools within the State of Indiana. The Project offers college credit to high school seniors who enroll in IU freshman courses that are offered at their home high schools.

This report presents the evaluation results for the second-year of the Project's implementation. The Project has grown from 6 high schools during the pilot-year, (1982-1983), to 15 high schools during the second year, (1983-1984), to an anticipated 24 high schools during the upcoming third year of implementation, (1984-1985).

Beginning in the fall of 1981 and continuing each successive year, a Project orientation meeting is held with high school administrators, counselors, and teachers from pre-selected schools. High schools are invited based upon the strength of their academic programs. At the orientation, the philosophy of the Project, descriptions of the ACP/IU courses offered, and other implementation information is shared. The high school personnel has the opportunity to talk with both the ACP Project staff and the IU faculty members in the specific course areas.

After the orientation meeting, each high school decides whether or not the Project fits with its school's curriculum needs. If the high school personnel chooses to participate, they decide which of the IU/ACP courses will be offered at their home high school. During the 1983-84 school year, course options have included English, Math, and Chemistry courses.

Using the IU/ACP teacher selection criteria, each high school administration recommends a high school teacher(s) to be responsible for teaching the IU/ACP course. The Project staff and IU faculty review each recommended high school teacher's credentials to determine whether or not he/she has the academic and professional background to become a teacher in the Project. Each teacher must have a Master's degree and 5 years teaching experience. All accepted high school teachers receive Adjunct Teaching status with Indiana University.

During the summer months, the newly selected ACP teachers attend a course-specific seminar. For the 1983-1984 school year, 9 English teachers attended a 8 day seminar for English W131, Elementary Composition; 15 Math teachers attended a 5 day seminar for the 3 ACP/IU Math courses; and 12 Chemistry teachers attended a 5 day seminar for Chemistry C105, Principles of Chemistry and Chemistry C125, Experimental Chemistry. These summer seminars are conducted by IU/ACP faculty members and cover the IU course syllabi. During the week of the seminar, the ACP teachers and IU faculty have the opportunity to interact in both classroom and informal settings. Each high school teacher is asked to follow the proposed IU course syllabus with some leeway allowed for individual teaching style and content flexibility. All ACP teachers submit their planned course syllabus to the IU faculty for approval prior to teaching the course in the high school.

During the school year, each high school does its own counseling to recruit students for the Project's courses. In addition to following the ACP/IU admission standards, some high schools may develop additional academic criteria for students to enroll. Each high school decides, based upon the number of students interested in the Project and scheduling limitations, the number of course sections and when each course will be offered (i.e. first semester or second semester).

In most schools, English W131, Elementary Composition is taught in a self-contained ACP class. That is, only students enrolling for college credit are scheduled into the class. In contrast, most of the ACP Math and ACP Chemistry courses (with one exception) are taught within classes that include both ACP and non-ACP enrolled students. Usually there is only sufficient enrollment in a given advanced chemistry or math class to offer one section of the course in the high school. Those students who take any course for ACP credit receive dual college and high school credit. Those students who are in an ACP course but are not enrolled for ACP credit receive high school credit only.

Project Evaluation Procedures

Evaluation has been an integral part of the Project's development. Although the Advance College Project has been modeled after the Syracuse University's Project Advance, which has been widely adopted with success, it was not known what types of concerns or issues would arise during the Project's initial implementation.

The overall purposes of the Project's evaluation activities have been to:

1. Facilitate implementation of the Project by identifying Project strengths and weaknesses and by documenting what transpired within each high school;

2. Assess how well Indiana University's course standards are being met for each ACP/IUB course as it is taught within each high school;

3. Assess the impact of the Project upon its various participants, i.e., the high school students who are enrolled in the ACP course, the high school teachers who teach the courses, and each high school and;

4. Establish a base-line of data for the Project in order to later assess longitudinal trends.

Student Data Collected

Several types of data are collected from students who enroll in any of the Advance College Project courses.

1. Academic Data - From the project's application form, the high school provides the students' SAT or PSAT test scores and the students' class rank within the high school.

2. Course Performance Measures - Depending upon the specific ACP course, various student performance measures are collected. In English W131, Elementary Composition, students are asked to write both a pre-test writing sample at the beginning and a post-test writing sample at the end of the semester. In the Math ACP/IU courses, students are administered a Diagnostic Skills Math Exam at the beginning of the semester and then take the same Math final exam as administered to the IUB students on campus. In the Chemistry C105 courses, ACP students are administered the same final exam as given to the IUB student on campus.

3. Student Questionnaires - All students who are enrolled in an ACP course are asked to complete the Advance College Project's Student Questionnaire. Areas assessed by this questionnaire include:

1) Factors which influenced the students decision to enroll in the course.
2) Level of course satisfaction.
3) Level of course difficulty.
4) Changes in study habits or new skills acquired.
5) College/University students plan to attend.
6) Whether students plan to transfer ACP college credits.
7) Whether enrolling in an ACP course influenced choice of college or college major.
8) Whether enrolling in an ACP course prevented early graduation from high school.
9) Impact of ACP course on student attitudes toward attending college and personal academic ability.
10) Whether students recommend ACP courses to other high school students.
11) Most valuable aspect of the course.
12) Least valuable aspect of the course.

Regardless of which course the student is enrolled, all ACP students are asked to complete the same student questionnaire in order to allow for comparisons within and between specific Advance College Project courses. A copy of the Advance College Project Student Questionnaire is found in Appendix A.

4. Course Evaluation Forms - A unique course evaluation form has been developed for each ACP course subject area: English, Math and Chemistry. While there are 21 common items in each of the evaluation forms, there are specific items which are unique to the particular course area.

For example, in Chemistry, there are items which deal with laboratory work while in English there are items which deal with small group work. Teachers are asked to administer the course evaluation forms to all the students in their class, i.e., both those enrolled and not enrolled for ACP course credit. A sample of the Chemistry course evaluation form is found in Appendix B.

Teacher Data Collected

1. Additional Teacher Seminars - On campus course meetings are held to provide the teachers an opportunity to interact with the IU faculty during the semester(s) that they were teaching their particular ACP course. The purpose of these meetings is to identify and address any problems that are occurring in the high schools. The ACP Math teachers met once on campus during the first semester with the IU faculty. All but one ACP Math teacher taught the IU/ACP course during the first semester.

The ACP Chemistry Teachers met twice on campus during the 1983-84 school year: once during the first semester and then again for a half-day session during the summer with the new 1984-85 ACP Chemistry teachers. The ACP English teachers met three times during the 1983-84 school year: twice during the first semester and once during the second semester. The first semester English teacher seminars were designed to assist the new ACP teachers the implementation of English W131. The second semester English meeting was a joint meeting of both the new and former ACP English teachers.

2. Site Visits - As part of the Project, an Indiana University faculty member visits and observes each ACP course while in session. During the 1983-84 school year, one of four IU English faculty members visited each of the twelve participating ACP English classes. Of the ACP Math classes, 9 of 12 Math classes were observed by an IU Math faculty member. Of the ACP Chemistry classes, 5 of 9 Chemistry classes were jointly observed by two Indiana University Chemistry faculty members.

3. Teacher Interviews - All newly participating ACP teachers for the 1983-84 school year were individually interviewed at their home high school after teaching the ACP course for the first time. A total of 22 teacher interviews were conducted of which 5 were with English teachers, 10 were with Math teachers and 7 were with Chemistry teachers. The interviews followed a pre-determined set of questions with some modifications for each course area. A copy of the English interview form is found in Appendix C.

4. Teacher Questionnaires - All former ACP English teachers, those in the second year of the Project, were asked to complete a Teacher Questionnaire which was modeled after the questions presented on the interviews. Questionnaires were completed and returned by 5 of the 6 ACP English teachers. No questionnaire or interview was administered to either of the two former Chemistry or Math ACP teachers.

   These teachers because of their earlier affiliation with Indiana University, have previously taught Indiana University courses (Chemistry C105/C125 or Math M215) during the summer session on campus. All math and chemistry teachers, however, were asked to complete a questionnaire entitled Advance College Project Final Exam Administration. The purpose of this questionnaire was to assess their perceptions of the Indiana University final exam that they administered to their classes and for them to report any test administration problems. A copy of the Advance College Project Final Exam Administration questionnaire can be found in Appendix D.

Advance College Project 1983-1984 Course Enrollment

The 1983-1984 school year was the second year for the implementation of the Advance College Project. During the previous year, the Project was pilot tested within six high schools in the State of Indiana. In the second year, the Project had expanded to include fifteen high schools. During the pilot year, five Indiana University courses were offered while a sixth course (Math M216) was added to the 1983-1984 year. The specific Indiana University courses offered through the Project are listed:

1) English W131 Elementary Composition (3 credit hours)
2) Chemistry C105 Principles of Chemistry (3 credit hours)
   Chemistry C125 Experimental Chemistry I (2 credit hours)
   (C105/C125 scheduled concurrently)
3) Psychology P101 Introduction to Psychology (3 credit hours)
4) Math M119 Brief Survey of Calculus I (3 credit hours)
5) Math M215 Analytic Geometry and Calculus I (5 credit hours)
6) Math M216 Analytic Geometry and Calculus II (5 credit hours)

No one high school offered all 6 of the Indiana University courses but each high school selected those courses which best matched its existing school's curriculum needs and the expertise of its faculty. Mathematics

M215 and English W131 were the two most widely adopted Indiana University courses in that they were available in 12 and 11 high schools respectively. Chemistry C105/C125 was taught in 8 high schools while Math M119, Math M216 and Chemistry C106/C126 were each taught in only one of the participating high schools.

During the 1983-1984 school year, a total of 453 ACP course enrollments were generated. This produced a total of 1671 Indiana University Bloomington in-state credit hours. Table 1 depicts the student enrollment breakdown of each course by high school.

TABLE 1

1983-1984 Advance College Project Course Enrollment

ACP Participating High Schools	English W131	Math M119	Math M215	Math M216	Chemistry C105/C125	Chemistry C106/C126	Total
SCHOOL 1	22	4	7		10		43
SCHOOL 2	37		6				43
SCHOOL 3	50				13	9	72
SCHOOL 4	60		4	1	3		68
SCHOOL 5	37		3		8		48
SCHOOL 6			1		9		10
SCHOOL 7	12		8				20
SCHOOL 8	16		9		10		35
SCHOOL 9			5		4		9
SCHOOL 10	10						10
SCHOOL 11	12						12
SCHOOL 12	24		14				38
SCHOOL 13			16				16
SCHOOL 14	13		4		4		21
SCHOOL 15			8				8
TOTAL	293	4	85	1	61	9	453

While there were 453 course enrollments, 395 students participated in the Project. Of the 395 students, 347 students were enrolled in one Indiana University course; 40 students were enrolled in two courses; and nine students were enrolled in three Indiana University courses. Of the 40 students who were enrolled in two Indiana University courses, 27 students received credit in English W131 and Math M215; 4 students were enrolled in English W131 and Chemistry C105/C125; 4 in Math M215 and Chemistry C105/C125; 9 students in both Chemistry courses C105/C125 and C106/C126; and 1 student enrolled in both Calculus courses, Math M215 and Math M216. Nine students were enrolled in English W131, Chemistry C105/C125 and either Math M119 or Math M215.

Which factor(s) influenced the students decision to be enrolled in an Advance College Project course?

A total of 404 questionnaires were received from students who took the English W131, Math M215 and Chemistry C105/C125 ACP courses. Teachers were asked to provide a questionnaire to each student enrolled for credit in the course. (From the total 453 course enrollments, student questionnaires were received from 89% of the enrollments.) On the questionnaire, each student was asked to check from a list of 13 factors, no more than 5 reasons why he/she decided to

enroll in an Advance College Project course. The factors which students indicated influenced their decision to enroll in an ACP course are listed in order of the greatest frequency:

1. To get a head start in college (N=369, 91%)
2. To earn dual credit (N=306, 76%)
3. To learn what a college course is like (N=200, 49.5%)
4. Expected course to be more individualized in high school (N=191, 47%)
5. To see if I can do college work (N=167, 41%)
6. Because of the course's cost, cheaper this year (N=153, 38%)
7. Plan to attend Indiana University (N=135, 33%)
8. To be challenged, stimulated (N=100, 25%)
9. Parents influenced my decision (N=93, 23%)
10. Course was recommended to me by teacher (N=66, 16%)
11. Course was recommended to me by counselor (N=53, 13%)
12. Course was recommended to me by friend (N=37, 9%)
13. Decided not to take advanced placement course (N=8, 2%)

A few students provided "other" reasons which they felt influenced their decision to take the course. These reasons included:

1. I was going to take it anyway, why not get college credit. (N=2)
2. Plan to attend Purdue which accepts the credits. (N=2)
3. Like to learn to write better. (N=2)
4. Seems like the right thing to do.
5. Because Mr. xxxx is an excellent teacher.
6. All my friends took it.
7. Get it over with.
8. Participate in a pilot project.

In addition to being interested in why high school students decide to enroll for college credit, a small study was conducted to determine why there weren't any enrollments in one high school's ACP math course. Students in two sections of Introductory Calculus (Math M119) were asked to write their reason(s) for not enrolling for college credit. It should be noted that this course was offered during the Spring semester. Responses from over 50 students were categorized into the following general reasons:

1. Anxious about calculus course. Some questioned their ability to get a good grade.
2. Wanted to take this course in preparation for another introductory calculus course in college.
3. Not certain if the ACP credit hours would transfer to the college/university they planned to attend.
4. Planned to major in math or science field. This course would not fit into college requirements for major areas.
5. Hoped to test out of calculus in college.
6. Cost of course. Reluctant to pay fees and not know whether they'll be able to get a good grade.
7. Last semester of high school, don't intend to study.

Academic Characteristics of Advance College Project High School Students

What were the academic characteristics of the high school students enrolled in the ACP courses? How did the ACP students compare academically to IU Bloomington freshman students? Several types of academic data were collected from each ACP student and IUB freshman student:

1) SAT test scores (Verbal, Math and Composite),
2) PSAT test scores (Verbal, Math and Composite), and
3) The student's high school class rank.

In Table 2, the SAT/PSAT average scores for the ACP students are compared with the SAT average scores for the entering 1983-1984 IUB freshman class. SAT or PSAT test scores were collected from the ACP students at the time of course enrollment. PSAT test scores were provided in lieu of SAT scores for those students who had not yet taken the SAT exam. Comparing the SAT scores of the ACP and the IUB freshman students, the average ACP/SAT test scores were significantly higher than the IUB in-state freshman residents Verbal and Math SAT scores (ACP students Verbal SAT=475, IUB in-state Verbal SAT=453; ACP students Math SAT=537, IUB in-state Math SAT=500). The IUB out-state (non-resident) freshman student's average Verbal SAT score was higher than the ACP students Verbal SAT test score, however, the ACP student's average SAT Math score was slightly higher than the IUB out-state freshman student ACP Verbal SAT=472, IUB out-state Verbal SAT=484; ACP Math SAT=537, IUB out-state Math SAT=536).

TABLE 2

ACP* and IUB** In-State and Non-Resident SAT/PSAT Mean Score Comparisons

	Average Verbal Score	Average Math Score	Composite	N	Missing Data
ACP SAT	475	537	1003	296	
ACP PSAT	45	49	94	74	
ACP TOTAL	-	-	-	370	6.3%
IUB In-State SAT	453	500	953	3530	
IUB N.Res. SAT	484	536	1020	1186	
IUB TOTAL SAT	461	509	970	4716	5.9%

*Of the 395 ACP students, 25 did not provide either SAT or PSAT scores.

**IUB entering freshman for first semester of 1983-84 school year. Data does not include transfer students. IUB student data provided by the IUB Office of Admissions.

In Table 3, the distribution of the ACP Verbal and Math SAT scores are compared to the IUB freshman SAT scores. Proportionately an equivalent percentage of ACP and IUB students' SAT Verbal scores fell between 600-799, (ACP students = 6.1%, N = 18 and IUB students = 6.9%, N = 348). But a higher percentage of IUB Verbal SAT scores fell between 200-399 (ACP students = 17.6%, N = 52 and IUB students = 22.5%, N = 1129). Upon examining the distribution of Math SAT scores, a higher proportion of ACP students had Math scores between 600-799 than the IUB students (ACP students = 28.4% and IUB students = 19.3%) while a greater proportion of IUB students Math scores fell between 200-399 than the ACP students (ACP students = 17.6% and IUB students = 22.5%).

TABLE 3

Distribution of ACP/IUB Students SAT/PSAT Test Scores (1983-1984)

SAT Scores	600-799 N	%	400-599 N	%	200-399 N	%	Missing Data N	%	Total
ACP Students									
Verbal SAT	18	6.1	226	76.3	52	17.6	-	-	296
Verbal PSAT	5	6.7	54	73.0	15	20.3	-	-	74
Math SAT	84	28.4	196	66.2	16	5.4	-	-	296
Math PSAT	8	10.8	54	73.0	12	16.2	-	-	74
Total ACP	-	-	-	-	-	-	25	6.3	395
IUB Students*									
Verbal SAT	348	6.9	3239	64.6	1129	22.5	-	-	4716
Math SAT	909	19.3	3282	69.6	526	11.1	-	-	4717
Total IUB	-	-	-	-	-	-	294	5.9	5010

*IUB data includes combined in-state and non-resident SAT data.

While the SAT/PSAT test scores measure student performance on a standardized test, other performance measures are strongly considered prior to accepting a student into either the Advance College Project or Indiana University. Each student's class ranking within his high school is a major selection variable. Both the Advance College Project and IUB admissions seek to admit those students who fall in the top 50% of their high school class.

In Table 4, the high school class rank comparisons are depicted for the ACP and the IUB freshman class (1983-1984). Contrasting the ACP and IUB student's class rankings, 61% of the ACP students were in the top 20% of their high school class as compared to 50% of the IUB students. Only 3.5% (N=14) of the ACP students fell below the upper 50% of their class as compared to 5% (N=252) of the IUB freshman students.

TABLE 4

ACP/IUB High School Class Rank Comparisons (1983-1984)

Percentile Breakdown	ACP N	%	IUB* N	%
Upper 10% of class	142	36.0	1332	26.6
2nd decile	100	25.0	1167	23.3
3rd decile	58	15.0	972	19.4
4th decile	40	10.0	768	15.3
5th decile	31	8.0	440	8.8
6th decile	12	3.0	155	3.1
7th decile	2	0.5	62	1.2
8th decile	0	0.0	25	0.5
9th decile	0	0.0	7	0.1
Bottom 10% of class	0	0.0	3	0.1
Missing Data	10	2.5	79	1.6
Total N	395	100.0	5010	100.0

*IUB data includes combined in-state and non-resident students' class rankings.

In addition to using both the SAT/PSAT scores and the student's class rank, the Advance College Project asks that the high school counselor and/or the high school teacher review each student's grades in recent courses. Regardless of their SAT scores and class rank, any student who did poorly in a previous English, math, or chemistry high school course is not allowed to enroll in that subject area's ACP course. This is done to insure that only those students who are academically prepared are enrolled for college credit.

In Table 5, the distribution of final grades for the Advance College Project's English, math and chemistry courses are provided. Due to the small number of students who were enrolled in Math M119 (N=4), Math M216 (N=1), and Chemistry 106/126 (N=9), the final grades are not displayed. Eighty-one percent of the ACP course grades were either A (A or A-) or B (B+, B or B-) while 15% were C (C+, C or C-), 3% were D (D+, D or D-) and fewer than 1 percent (N=3) experienced course failure. The course grades tend to indicate that most students were able to successfully complete the ACP course(s) in which they enrolled. Only 17 students (3.1%) received a D (D+, D, D-) F or failing grade in the course. The distribution of the grades, however, also suggests English teachers may have graded more leniently with only 11% (N=31) of the students receiving a grade of C (C+, C, or C-) as compared to 25% of the students who took Math M215 or Chemistry C105.

TABLE 5

Distribution of Final Grades in Advance College Project Courses

	English W131		Math M215		Chemistry C105		Chemistry C125		Total	
	N	%	N	%	N	%	N	%	N	%
A	112	38	28	33	21	34	32	52	193	38.6
B	143	49	31	36	22	36	19	31	215	43.0
C	31	11	21	25	15	25	8	13	75	15.0
D	6	2	4	5	2	3	2	3	14	2.8
F	1	0.3	1	1	1	2	0	0	3	0.6
	293	100.0	85	100	61	100	61	100	500	100

Student Perceptions: English W131, Elementary Composition

What were students' perceptions of having taken the English W131 course? Of the 294 students who took English W131, 272 students (92.5%) completed the ACP Student Questionnaire at the end of the semester. Of these, 80% (N=217) indicated that they were "very glad" that they took the class while 18% (N=50) were "somewhat glad." Only 5 students (2%) stated they were a little sorry while none of the students wished that they hadn't taken the course. The students surveyed also reported that as a result of having taken this ACP class:

*My study habits changed, I needed to spend more time studying (N=120, 44%).

*My study habits and time management skills have improved (N=157, 57%).

*I have gained new skills that will be useful in college (N=226, 83%).

The new skills which students are referring to are improved writing and thinking skills that will be of benefit to them in their college courses. When asked to describe the most valuable aspect(s) of the English W131, Composition course, students offered these representative comments:

*It taught me how to write about almost any given topic. Even the ones that I don't really get involved in.

*Learned what college level English was like.

*I learned how to analyze what I read. I also learned how to synthesize materials. These two aspects I would guess are necessary when writing papers in college.

*In trying to get a good grade in this course, I had to teach myself discipline. I learned better study habits with the help of the book. The teacher was also an excellent help.

*Learning to take a topic subject and developing it. It has really helped me understand how to write a paragraph that is correct.

*This course really helped me improve and better develop my writing skills.

*I learned how to use different writing styles and methods - new aspects.

*I learned how to use my imagination and creativity better in writing a theme.

*I have become less scared of writing and expressing myself. I learned a great deal about myself through some of the papers that I did.

*The revision of the English history and the information on how language originated. Composition skills and revisions guidelines.

*The preparation it gave me for college. This course taught things about writing I didn't know before. Taking this course will now help me when I write papers for other classes.

*The head start I gained on other freshman entering college. Next year I will be able to take another course in a more specialized area. I enjoyed the time spent in class with my teacher, the time was more individualized with my teacher because of the number of students in the class.

*Listening and participating in the discussions and having different viewpoints.

*I was able to learn how to think more logically and draw inferences from readings. It also taught me how to write with a definite purpose.

*To be on your own to do your own work. We had to come up with our own paper topics.

*The opportunity to expand my horizons and to learn how to write in new and improved ways. I took what I knew and bettered it.

*Writing the research paper was the most valuable aspect. Knowing how to write a research paper will be very valuable in college.

*The research paper was the first LONG paper I ever had to write and I found that though it was hard, it was interesting and even fun. NOW I AM NO LONGER scared when I think of writing research papers.

*The freedom to express myself and just let my pen run free.

*Everyone must learn to have responsibility in class. The research paper was the hardest homework assignment I ever had, but it taught me better study habits.

*I learned how to handle the writing process much better and to go about it more efficiently.

*I now feel more assured and prepared about beginning college next year.

A sampling of some of the students' comments concerning what they felt was the least valuable aspect(s) of the English W131, Composition course is listed:

*I don't feel the grading was as fair and accurate because of a lack of enough evidence.

*It was too much work to go along with a full high school schedule.

*The grading system was harder than some high school classes so it brought some people's high school grade point average down.

*The research paper was really useless in this course. This is not really a research class, it is suppose to be a writing class.

*The course was too restrictive. A person was not allowed to write about subjects which they felt strongly about. The course was repetitive. You were told to read two or more essays, synthesize, and write a paper, and all in preparation for a research paper.

*I feel that more of the book should be covered, even if only a review. Also some of the techniques used to stimulate the student are rather unorthodox and in some cases, question their successfulness. An example is how the book wants students to pick out selected words from essays.

*I didn't like writing about occupations all the time.

*I had to do so many writing so often that I became bored with my writings and I had trouble coming up with ideas.

*It takes a lot of work which you should be willing to do.

*The grading system (4, 3, 2, 1). This type of grading was used because it was easier and quicker for the teachers. It did not help me. There wasn't as much feedback on my work as I would have liked.

*I didn't learn how to make my writing more interesting just how to make it more clear.

*The group sessions could have been very helpful in criticizing papers and proofreading. However, most of the time the people in the groups were talking about subjects that had nothing to do with the papers.

*I found some of the topics not interesting and I found I was not spending the needed time to sufficiently complete a paper to my liking.

*Doing the exercises in the textbook. I thought many were unrelated and time consuming.

*Meeting every single day. I think we should have had discussion days, but then a day or so off to come up with our own ideas in form of a rough draft.

*We were a little short of time so we were rushed near the end.

These students were asked whether or not they felt (1) other high school students should be able to take college courses while in high school if they would (2) recommend this ACP course, English W131, Elementary Composition to other high school students. The results displayed in Table 1 indicate that 92% (N=249) recommend the concept of having college courses in the high school and recommend English W131 to other high school students. Eight students (3%) did not endorse the idea of having college courses in the high school while 6 students (2%) did not recommend English W131 to other students. Students who did not recommend English W131 gave these reasons:

1) Too much work to go along with a full high school schedule. (received grade of D)

2) I didn't learn anything about writing essays. The class was not very useful except in the research paper unit. I feel that ACP courses should still be offered but by qualified college instructors. (Received grade of B)

3) There was hardly any creative writing. I know this is a research class but I got tired of reading a story and just summing it up. I am sure I would enjoy a college creative writing class much better. (Received grade of C)

4) From views of others in college, my teacher seemed to grade harder because we were preparing for college rather than in college. I seem to neglect other classes because this was a college course and other grades fell. (Received grade of C+)

5) Students were very restricted in their paper topics to areas of career and college. Not enough creativity was allowed. (Received grade of B)

TABLE 6

Student's Endorsement of ACP/ENGLISH W131 Composition

	Agree N	Agree %	Disagree N	Disagree %	Not Sure N	Not Sure %	Total N
Recommend College Courses in High School	249	92	8	3	15	5	272
Recommend this Course	250	92	6	2	16	6	272

Summary- English W131 is a very well received course by the high school students with 80% of the students stating that they were "very glad" and 18% "somewhat glad" to have taken the course. Eighty three percent (N=226) indicated that

they learned new skills as a result of taking the course that will be useful in college. Improved writing, thinking, and studying skills were often cited by the students as the courses's benefits. While some students expressed concern about the lack of "creativity" allowed in the writing class since many of the writing assignments were pre-defined, one student commented, "the most valuable aspect of the course was "learning precise writing skills. I will be able to utilize these throughout my college career in many different subject areas". Based upon the students' responses, English W131 has helped to provide students with the needed prerequisite writing skills in order to be successful in college.

Student Perceptions: Math M215, Analytic Geometry and Calculus I

How satisfied were the ACP students with the M215 course that they took? Of the 85 students enrolled in M215, 75 students (88%) completed an ACP Student Questionnaire at the end of the semester. Of these, 55% (N=41) stated that they were "very glad" that they took M215 while 37% (N=28) were "somewhat glad". Two students indicated they were a "little sorry" while 4 students (5%) stated they "wished that they hadn't taken the course".

Contrasting the students' final course grades with their level of course satisfaction, final grades appear to be a modest factor. Of the 4 students who wished they hadn't taken the course, one student received an A- while 3 students received a grade of C. Of the 2 students who were a "little sorry", one received a B- while the other received a D-. In contrast, the student who received a F in the course stated he was "somewhat glad" to have taken the course. The student who received an A- and wished that she hadn't taken M215 stated:

> I do not think this is a good course for high school. I believe that this course is much easier than a college course, and so it gives the student the wrong impression about college. The student may be going into a (college) course that may be too hard for her or him.

This student's minority viewpoint raises an interesting issue about students taking first semester college calculus in the high school. The speculation, whether students who take first semester college calculus in the high school will have a difficult time in their second semester college calculus course, has yet to be substantiated in the Project's follow-up studies of former students. (A planned follow-up study of these students, 1983-1984 ACP enrollees, will help answer that question and determine whether most students continue to feel that they benefited from having taken Math M215 while in high school.)

The students surveyed also reported that as a result of having taken this ACP class:

*My study habits changed, I needed to spend more time studying (N=42, 56%).

*My study habits and time management skills have improved (N=36, 48%).

*I have gained new skills that will be useful in college (N=51, 65%).

The students were asked to describe what they felt were the most and least valuable aspect of the M215 calculus course. A sampling of students' comments are listed which represent what they found to be the most valuable aspect of the M215 Math course. In addition, several students cited their "teacher" as the most valuable aspect of the course.

*The one-to-one assistance I could get from my instructor. I don't think I'll be able to find that at IU.

*Seeing what an actual "college" final exam was like.

*This course has broadened my perspectives and increased my knowledge and understanding of mathematics.

*Relative low number of students, great teacher and a good learning atmosphere resulted in a more individualized course. The course gave me more confidence, now I know I can handle college work.

*The course, it really made me think. Learning to use my mind to its full potential.

*Easy to ask teacher questions in class or out of class on a one-to-one basis. I don't think I could get the personal attention from a college teacher as much as I could from a high school teacher.

*The five hours of college credit at a cheaper cost.

*To learn what college classes teach and what they expect from us.

*I got a chance to make a head start on my studies. I also got the opportunity to explore what a college course could be like. Helped me improve my thinking ability.

*Learning about the type of tests college teachers are likely to give. Most valuable aspect is simply learning what to expect in college.

A sampling of some of the students' comments concerning what they felt was the <u>least</u> <u>valuable</u> aspects of the M215 course is listed:

*The pressure of knowing that this grade goes on a college transcript, lack of studying.

*Although it was beneficial, the amount of homework at times would cut into my time for other classes' homework.

*The least valuable aspect was the material learned seemed impractical to everyday life.

*No use of computers.

*The lack of study time needed to complete the course.

*Memorizing the integral and differential formulas.

*The final exam.

*If, indeed, I cannot comprehend the next level of math, I will not have successfully achieved what I wanted to in this course.

*That it is not in a college-like atmosphere.

*Review chapters at the beginning of the course.

The students were asked whether or not they felt (1) other high school students should be able to take college courses while in high school and if they would (2) recommend this ACP course (Math M215) to other high school students. The findings displayed in Table 7 reveal that 88% (N=66) of the students felt other high school students should be able to take college courses in high school while 82% (N=61) recommended the Math M215 course that they took to other high school students.

Most students who either did not endorse the concept of having college courses in the high school or did not recommend the Math M215 course were "not sure" of how they felt. Only one student disagreed with the concept of having college courses in the high school while 4 students (5%) did not recommend the Math M215 course that they took.

TABLE 7

Students' Endorsement of ACP/Math M215 Course

	Agree N	Agree %	Disagree N	Disagree %	Not Sure N	Not Sure %	Total N
Recommend College Courses in High School	66	88	1	1	8	11	75
Recommend this ACP Math M215 Course	61	82	4	5	10	13	75

Summary- Ninty-two percent of the students (N=69) indicated that they were either "very glad" or "somewhat glad" to have taken M215 in the high school. Frequently cited reasons for why the course experience was valuable included:

1) Individualization within small class size,
2) One-to-one student-teacher interaction,
3) Ability to experience a college final exam,
4) Ability to learn what's expected in a college course, and
5) Improved thinking and studying skills.

While a few students complained about the amount of studying that was expected, this resulted in making them more cognizant of what will be expected of them in college. As one student expressed: "I am glad that this course was offered to me. It gave me great incentives to study and it was very interesting".

Student Perceptions: Chemistry C105/C125, Principles of Chemistry and Lab

What were students' feelings toward having taken the Chemistry C105/C125 courses? Of the 61 students enrolled in Chemistry C105/C125, 53 students (89%) completed an ACP Student Questionnaire at the end of the semester. Of these, 54% of the students (N=28) stated that they were "very glad" to have taken the course while 35% (N=18) were "somewhat glad". Five students (9%) indicated they were a "little sorry" while only 1 student "wished that he hadn't taken it". This student commented that he did not have enough time to study this year. Consequently, he decided not to transfer the ACP credits to the college he plans to attend. (His grades were C+ in C105 and B in C125.) Other students who indicated that they were "a little sorry" stated:

1) The course took up too much time;
2) The course was a lesson in frustration, I felt constantly dumb;
3) Didn't like the 2 hour labs in the morning. Needed to be at school at 7:30 a.m.;
4) The credit will not transfer to the college I plan to attend or apply to my intended major (received D in C105 and C in C125); and
5) I have now changed my mind about my major in college and I really didn't need this class. This class was very well organized and I feel it would be very beneficial for one who is really interested in chemistry.

The students surveyed also reported that as a result of having taken the ACP Chemistry course:

*My study habits changed, I needed to spend more time studying (N=28, 53%).

*My study habits and time management skills have improved (N=28, 53%).

*I have gained new skills that will be useful in college (N=42, 80%).

The students were asked to describe what they felt was the most and least valuable aspect of the C105/C125 Chemistry course. Listed below is a sampling of students' comments representing what they found to be the most valuable aspect(s) of the C105/C125 course.

*I learned that I am going to need to improve my study habits, instead of having two individual Chemistry courses, the lab was related to the lecture.

*I was challenged in this class more than in my others and the individualized aspect gave me a better understanding of the material than if I had been one of 400 students.

*Small class with serious students.

*Learning what a college course would be like and what a college final was like. Lab work was integrated into the topics being covered. This made for better understanding of concepts.

*Studying material that requires more time and thought than previous classes. I liked writing labs.

*Furthering my skills in chemistry.

*Learning a higher level of chemistry than what was learned in first year chemistry.

*The homework assignments and the teacher. Both made the class interesting and if you did the work, you understood the concepts a lot better.

*More individual attention, therefore, a better class atmosphere. An excellent teacher, very stimulating and inspiring.

*The labs were the most valuable aspect of this course. It is one thing to read and write information, however, it is a total different experience to apply these concepts.

*The close-knit ties formed between the teacher and students as we shared our anguishes and triumphs.

A sampling of some of the students' comments describing what they felt was the least valuable aspect of the C105/C125 Chemistry course is listed.

*Because we had to switch texts to the IU text I felt a little confused.

*You needed to spend more time on the material than what was available.

*Being forced to think this early in the morning (8:00 a.m.) I am not awake until noon.

*I may have paid over $200.00 to take a course and the university I am going to attend may not accept the credit.

*The final exam is not representative of what we studied during the year.

*The consuming amount of time to write up lab reports.

*The pre-labs, by the time I had done the work assigned for them, I rarely had time to read the procedure as thoroughly as I would have liked.

*I didn't enjoy the textbook. I relied more on the teacher explaining the material. The book did a poor job of relating to the students.

*I felt the course as a whole was complete and saw no major faults (or least valuable aspects) in the course.

The students were asked whether or not they felt (1) other high school students should be able to take college courses while in high school and if they would (2) recommend this ACP course, Chemistry C105/C125, to other high school students. The findings displayed in Table 8 indicate that 91% of the students (N=48) endorse the idea of high school students taking college courses within the high school while 89% (N=47) recommended C105/C125 to other high school students.

Only one student was against the concept of offering college courses in the high school while 2 students did not recommend C105/C125 for other students. Interestingly, these two students were enrolled in the same high school class and both had grades of B or better in C105 and C125. One student said, "some of the lab didn't seem to make sense or fit into the course, other than that, it was great". The other student complained about "being in class for 2 hours during lab days". One student who recommended C105/C125 to other students qualified his endorsement with the understanding that "students realize the (amount of) studying needed for this course".

TABLE 8

Students' Endorsement of ACP/Chemistry C105/C125 Courses

	Agree N	Agree %	Disagree N	Disagree %	Not Sure N	Not Sure %	Total N
Recommend College Course in High School	48	91	1	2	4	7	53
Recommend this ACP Chemistry Course	47	89	2	4	4	7	53

Summary- Eighty-nine percent of the students (N=46) indicated that they were either "very glad" or "somewhat glad" to have taken the ACP C105/C125 Chemistry courses. In addition to stating that the course gave them a head start in college, students commented that the course gave them a better understanding of chemistry principles due to the individualized instruction that they received. Many students felt that the "labs" portion of the course (C125) was very valuable, especially when the labs integrated the concepts taught during the lecture (C105) aspect of the course. Many students commented upon the excellent instruction that they received from their teachers. Some students, however, complained about the amount of time the course required in terms of studying, homework and preparing lab reports. The extra amount of studying, however, made them aware of what to expect in college. As one student stated: "I learned a lot in this course. I actually had to study to get a good grade. It showed me that college is not going to be a piece of cake".

Student Perceptions: A Comparison Between the ACP Courses

What differences is there between how students perceived each of the various ACP courses? Of the 454 course enrollments, ACP Student Questionnaires were collected from 403 students (88.8%). Students who took both Chemistry C105/C125 and Chemistry C106/C126 (N=9) each completed only 1 questionnaire, so that, questionnaires were received from 90.6% of the students.

Course Satisfaction - Overall, 71.5% (N=287) of the students indicated that they were "very glad" to have taken an ACP course while 24.5% (N=98) reported they were "somewhat glad". Only 12 students, stated they were "a little sorry" to have enrolled in an ACP course, while 5 students wished that "they hadn't taken it". Students who took English W131 appeared to have the highest level of course satisfaction with 80% (N=217) being "very glad" and 18% (N=50) "somewhat glad". No student taking English W131 wished that they had not taken the course, while one student who took Chemistry C105/C125 and 4 students who took Math M215 wished they hadn't taken the respective courses. These results are shown in Table 9 below.

TABLE 9

Students' Level of Satisfaction Toward Each ACP Course

	Eng W131		Chem C105		Math M214		Total	
	N	%	N	%	N	%	N	%
Very Glad	217	80	28	54	41	55	287	71.5
Somewhat Glad	50	18	18	35	28	37	98	24.5
Little Sorry	5	2	5	9	2	3	12	3
Wish I Hadn't Taken It	0	0	1	2	4	5	5	1
Total	272	100	52	100	75	100	402	100

Course Difficulty - For most students (N=256, 64%) who enrolled in any of the ACP courses, the course was "as easy or as difficult" as what the students had expected. A greater proportion of students taking Chemistry C105/C125 felt that Chemistry C105/C125 was more difficult than what they expected (N=16, 31%) while a greater proportion of students taking English W131 thought it was easier than what they expected. These results are depicted in Table 10.

TABLE 10

Student Perceptions of Course Difficulty

	Eng W131		Chem C105		Math M215		Total	
	N	%	N	%	N	%	N	%
Easier	75	28	3	6	13	17	91	23
About as easy/difficult as I expected	170	62	33	63	50	67	256	64
More difficult	27	10	16	31	12	16	52	13
Total	272	100	52	100	75	100	402	100

Course's Impact - Students were asked to rate to what extent they agreed or disagreed with the following 8 statements concerning the course's impact upon themselves. As a result of having taken this ACP course:

1. My study habits and time management skills have improved.

Overall, 54% (N=219) of the students indicated that their study habits and time management skills have improved. A slightly larger proportion of students who took English W131 reported improvement in study habits (N=154, 57%), than students in Chemistry C105/C125 (N=28, 53%) and Math M215 (N=36, 48%). Twenty-four percent (N=95) of all the students stated they were "not sure" if their study habits improved while 22% (N=89) reported there was no improvement.

2. I am looking forward to attending college.

Of the 402 students, 83% (N=334) indicated that as a result of taking this ACP course, they were looking forward to attending college. Fourteen percent (N=57) reported not being sure while only 3% (N=12) were not looking forward to attending college. There was little variation in the students' responses between courses.

3. College will be easier than I first expected.

The majority of students (N=208, 52%) were "not sure" how they felt about this statement with 20% (N=38) agreeing with it and 28% (N=111) disagreeing with it. A greater percentage of students who took Chemistry C105/C125 felt that college will be easier (N=19, 36%) while 23% (N=12) of the Chemistry C105/C125 students felt that college would be more difficult.

4. I now feel uncertain of my ability to do college rank.

Only 7% (N=29) of all students stated they were now uncertain about their ability to do college work while 79% (N=316) disagreed with the statement and 14% (N=58) were "not sure". Of the students who stated they were uncertain of their ability, 15 had taken English W131, 6 Chemistry C105/C125 and 8 students completed Math M215.

5. I have gained new skills that will be useful in college.

The overwhelmingly majority of students (N=322, 80%) agreed that they have gained new skills that will be useful in college, while only 6% (N=25) disagreed and 14% (N=56) were "not sure". By course, 83% (N=226) of students taking English W131, 80% (N=42) of students enrolled in Chemistry C105/C125 and 65% (N=51) of students taking Math M215 reported gaining new skills. A greater percentage of students taking Math M215 (N=17, 23%) were "not sure". These students may be less aware of how their new knowledge of calculus will be useful and transferable to other areas in college.

6. I discovered I will have to work/study harder in college than I did in high school.

Seventy-five percent (N=302) of the students agreed that they will have to work harder in college than what they did in high school while only 8% (N=34) of the students disagreed and 17% (N=67) of the students were "not sure". A few students taking ACP courses reported skepticism concerning the course's level of difficulty. Some students stated that they felt the ACP course was "easier" than a college course while others complained that the ACP course was "harder" and was graded more harshly than what they've heard from their friends at college. These doubts along with whether they received a better or poorer grade than what they expected would contribute to their uncertainty about whether they will need to work harder in college.

7. I feel other high school students should be able to take college courses while in high school.

Do students endorse the concept behind the Advance College Project now that they participated in the Project? The overwhelmingly majority, 90% (N=364) of the students agreed that high school students should be able to take college courses in high school while only 3% (N=12) disagreed and 7% (N=27) were not certain. Those students who were "not sure" felt that it depended upon "who" the student was and if they were willing to accept the challenge.

8. I would recommend **this** ACP course to other high school students.

Overall, 89% (N=359) of the students recommended the ACP course that they took with 92% (N=250) recommending English W131, 89% (N=47) endorsing Chemistry C105/C125, and 78% (N=61) recommending Math M215. Only 6 students did not recommend English W131, 2 students did not recommend Chemistry C105/C125 and 4 students did not recommend Math M215. While 7% (N=30) of all of the ACP students were "not sure" whether to recommend the course, 13% (N=10) of the students who took Math M215 reported they were not sure. What is the relationship between whether students recommend the ACP course and the final course grade that they received in the course? The findings in Table 11 reveal that of the 14 students who did not recommend the specific ACP course that they took, 11 students received an A or B while 2 got a C and only 1 student received a D or F. Conversely of the 13 students who received a D or F, 10 students recommended the ACP course that they took to other high school students.

TABLE 11

Relationship Between Course Recommendation and Final Grade

	Recommend		Not Recommended		Not Sure		Total	
	N	%	N	%	N	%	N	%
A or B	304	76	11	3	15	3	330	82
C	45	11	2	0.5	13	3	60	15
D or F	10	2.5	1	0.5	2	0.5	13	3
Total	359	89	14	4	30	7	403	100

Some students included unsolicited comments about the Project or the specific course that they took. Some students stated that they wished other ACP course offerings were available at their high schools. Some of these comments are listed below:

*I feel that offering this college level course at the high school level is the smartest move educators have made in a long time. (English W131)

*Thank you for the opportunity to earn college credit at a reduced price in high school. The experience was challenging and gratifying. (English W131)

*I was glad that the credit would transfer to Purdue. (English W131)

*I put forth effort in obtaining a decent grade in a college course and received only a good grade for a high school course. How fair is that? It seems as though I received a B on papers that were A material. (English W131)

*I wish that our school (xx) had more ACP classes to offer. I feel that many students would react to this in a positive manner. (Math M215)

*I would strongly recommend this course to anyone interested in math or science. I felt that it has helped me <u>most</u> compared to <u>all</u> of my other classes I've ever taken. Thanks for the opportunity to have taken such an interesting class. (Math M215)

*I am extremely happy that I took this course, and I think the opportunity to take college courses during high school should be offered to more students. (Math M215)

*I think more courses should be offered for college credit in high school. I see no reason to be required to take a course in high school and then be required to take the same course (basically) in the freshman year of college; paying for it also. (Chemistry C105/C125)

*I feel that this is an excellent program and hope that it will be expanded later, to other sciences. Such as physics or biology. I am also glad I took this because I could get credit for other than high school credit because I have enough high school credits to graduate. (Chemistry C105/C125)

*I believe juniors should be able to take this course for college credit. I felt that the instructor did an excellent job. It would also be helpful if IU would provide some kind of plan that would allow transcripts to be sent to the high school so that the records would be more easily accessible. (Chemistry C105/C125)

*I feel this course has helped me in preparing for college classes. I suggest the course be continued as it's been a great asset to me. (Chemistry C105/C125)

Course Evaluation - In addition to completing the ACP Student Questionnaire, students were asked to complete a course evaluation form for their particular class. While each course (English W131, Math M215 and Chemistry C105/C125) had a different set of items, there were 21 items that were common to the three courses. Teachers were asked to have all students in the class complete the questionnaire, so that for the math and chemistry classes, many of the students completing it were not enrolled for college credit. There were 294 students who were enrolled in English W131, while 320 students completed the evaluation form. In Math, 89 students were enrolled in Math M215 (N=85) and M119 (N=4) but 256 students completed the evaluation form. In chemistry, 61 students were enrolled in Chemistry C105 but 165 students completed the form.

The results reported in Table 12 reveal that there is less variation between the students' ratings by course than between specific items. Based upon a 4-point scale, students gave high ratings to instructor preparation, instructor presentation, and teacher-student rapport. In addition, all students felt that they learned a lot in this course with the average course ratings of 3.1, 3.1 and 3.0. Two items which received lower ratings were:

1) The amount of energy students put into the class and
2) Textbook satisfaction

The textbook for English W131 received the lowest overall rating (2.1) while the textbooks for math (2.5) and chemistry (2.4) also received lower than average ratings.

Students who took English W131 gave higher ratings to having developed: 1) creative ability ,2) a greater sense of personal responsibility, and 3) more confidence in myself than either the math or chemistry students. The math and chemistry students, on the other hand, rated higher the statement. "I developed the ability to solve problems in this field," than the English students.

TABLE 12
ACP Course Evaluation Results (Common Items)

Questionnaire Items	Average Scale Rating* English	Math	Chemistry
1. Learned more in this course than others	2.7	2.9	2.8
2. Instructor is well prepared	3.4	3.5	3.1
3. Instructor explains subject clearly	3.2	3.3	3.0
4. Instructor is enthusiastic	3.6	3.5	3.3
5. Instructor make subject interesting	2.9	2.9	2.9
6. Instructor stimulates my thinking	2.9	2.8	2.8
7. Students put a lot of energy into class	2.7	2.6	2.6
8. Class activities are tied to course objectives	3.1	3.3	3.1
9. Knew what was expected of me in course	2.8	3.0	2.9
10. Instructor regularly available for consultation	3.4	3.3	3.2
11. Course assignments are interesting and stimulating	2.3	2.3	2.4
12. Complexity and length of course assignments are reasonable	2.9	2.9	2.8
13. Pleased with text required for course	2.1	2.5	2.4
14. Instructor collects enough evidence for grading	3.0	3.2	3.1
15. Instructor offers specific advice to remedy weaknesses	3.2	2.9	2.7
16. Instructor makes me feel free to ask questions	3.4	3.2	3.3
17. I learned a lot in this course	3.1	3.1	3.0
18. I developed the ability to solve problems in this field	2.6	2.9	3.0
19. I developed creative ability in this course	2.8	2.3	2.4
20. Developed greater sense of personal responsibility	2.9	2.5	2.7
21. Developed more confidence in myself in this course	2.9	2.5	2.5
Number of students responding	165	320	256

*Ratings are based upon 4-point scale.

COURSE COMPARABILITY ANALYSIS: ACP vs. IUB

Prior to the pilot year of the Project, the Advance College Project Evaluation Plan (Lave, 1982) prioritized the emergent issues, concerns and evaluation needs of the Project.[1] The priorities were categorized into immediate, intermediate, and long-term evaluation needs. An immediate evaluation priority was to plan and design course evaluations in order to certify that each ACP course meets Indiana University's academic standards. The purpose is to assess whether there is "equivalency" between each course as it is taught on campus and in the high schools. Comparisons between ACP and the IUB course counterpoints need to be made in terms of:

*Course content covered,
*Student workload/assignments,
*Student assessment/evaluation procedures
*Grading criteria and
*Quality of instruction.

Student performance measures have been developed for each of the ACP courses. These same assessment tools are used in both ACP and IUB classes in order to provide a standardized means for comparing academic achievement for each course area.

1. Lave, Janice. Advance College Project Evaluation Plan, October 1982.

Student Writing Assessment: English W131, Elementary Composition

Background - Measuring growth or change in writing skills is not as straightforward as assessing student knowledge on an objective multiple choice test. With the ACP chemistry and math courses, a final exam can be used to compare the IUB and ACP students performance. In a composition course, the procedures for carrying out the assessment of writing samples must be carefully planned and executed in order that the results can have validity. A well designed writing assessment must address each of these questions:

1) How many writing samples should be collected?

2) When should the writing samples be collected?

3) What is the nature of the writing task?

4) If more than one writing sample is collected, should the nature of the writing task vary or should it be the same?

5) What can be done to help ensure that the administration and collection of writing samples is "constant" across different classes?

6) What can be done to help ensure that "student motivation" or "effort" toward the writing assignment is constant over different writing tasks?

7) By what method(s) should the writing samples be evaluated?

8) How much training is needed for each rater or evaluator of the writing task?

9) After the assessment has been completed how reliable are the ratings done by the evaluators?

10) Overall, how valid is the designed writing assessment? What problems could occur to invalidate the assessment process?

During the 1982-83 and the 1983-84 school year, pre-test and post-test writing exercises were given to all ACP students who took English W131, Elementary Composition. The writing task, to write about an abuse of power, was the same for both the pre-test and post-test. The pre-tests were written during the first week of class and the post-tests were written at the end of the semester.

During the 1982-83 year, a total of 205 complete sets of pre-tests were collected from the ACP students and 79 sets from freshman students enrolled in English W131 on the Bloomington campus.

Twenty-eight independent raters were trained to use a "holistic rating approach" to categorize the writing samples into one of four levels of writing competency which ranged from low performance (rating=1) to high quality (rating=4). A t-test statistic revealed that there was no significant difference between the pre-test scores and the post-test scores of the ACP and the IUB students.

During the 1983-84 ACP teacher interviews, the English W131 teachers reported that they experienced problems during the administration of the post-test exercises. They stated that not all students took the post-test exercise seriously because it came during the last week of the semester and they were "burned out" after having just completed the course's research paper. Since the post-test was completed in the last week, students were also aware that the teacher did not have time to grade the papers in order for the essay to count in their final course grade. Consequently, these students tended to put their best effort into the pre-test, in order to impress the teacher since it was their first college-level course, but de-emphasized their effort on the post-test since they knew it would not be counted as part of the course grade. In addition, students complained about having to write about the same topic, abuse of power, twice. Some students argued that they had used their best ideas for the pre-test and had trouble identifying a second "abuse of power" to address. Consequently, the ACP English instructors felt that the post-test did not indicate the students true or best performance.

Based upon the teachers' comments, it was apparent that there were problems in the existing design of the pre- and post-test writing assessment. And as a consequence, the testing procedures needed to change for the 1984-85 school year. Additionally, no inferences about changes in student growth based upon a quantitative assessment could be made from the 1983-84 ACP writing samples.[2]

Changes in the Design of the Pre-Post Test Writing Assessment

Specific modifications have been planned for the collection of writing samples for the 1984-1985 school year. Students will still write a pre-writing and post-writing exercise; however, three changes have been made:

1) Two comparable writing tasks will be used so that each student will write on both topics, one in the pre-test and the other in the post-test. The class will be divided in the pre-test so that half of the class will be assigned Task A and the other half Task B. Those writing Task A on the pre-test will write Task B on the post-test and vice-versa.

2) The post-test can be administered anytime during the last 3 weeks of the semester and not necessarily during the last week of the semester to allow for the teacher to grade the essays, and

3) The post-test will count as part of the student's final grade in the course.

Other Methodological Consideration

The writing samples collected during the 1982-1983 school year had been analyzed using a "holistic approach", i.e. each essay was categorized in one of four performance levels. With the 1983-84 writing samples, the Project wanted to experiment with an alternative method for assessment which focused on a more "qualitative approach". The basis for the qualitative approach was derived from four dimensions of Andrew Wilkinson's Crediton Model.[3]

2. Lave, Janice. Advance College Project, Major Evaluation Findings, 1982-1983 Pilot Year, September, 1983.
3. Wilkinson, Andrew et al. Assessing Language Development, Oxford University Press, 1980.

The Crediton Model, however, had never been applied to assessing high school students writing and has only been applied on a limited basis to the writing of college students.4

Adapting the model to the population and the specific writing task, abuse of power, would require an examination of ACP and university writing samples. According to Wilkinson, writing maturity is a reflection of personal maturity. Using his model, four different dimensions of writing can be measured in a set (or sets) of "scales". These four areas are the Cognitive, Affective, Moral, and Linguistic (or Stylistic) dimensions. Using the model, Anderson (1984) analyzed 284 ACP and 38 university essays. Anderson states, "the single most remarkable thing about the essays is their homogeneity, with a large majority sharing the same general levels of development on the various scales."5 Anderson developed a multi-dimensional profile of the typical essay using the four dimensions of the model. The Cognitive dimension includes four levels of abstraction: 1) Describing, 2) Interpreting, 3) Generalizing, 4) Speculating. Anderson found the typical essay to be in a transition-stage between "interpreting" and "generalizing" in that it contained many abstractions from data but failed to link or elaborate them.

In the Affective dimension, there are three sets of scales which refer to 1) The self, 2) Others, and 3) The reader. The typical essay was found to convey a highly conventional impression of self. others and readers. The writer adopted as a self-image, a "serious "essayist who issues authoritative assertions in painfully formal language. The actions and motives of other people are characterized rather than analyzed, and the characterizations tend toward the stereotypical. Finally, the essay caters to a particular reader, one more concerned with form than content, suggesting that prior instruction in writing has focused on surface mechanical detail at the expense of broader rhetorical concerns.

On the Moral dimension, the typical essay displays any of several attitudes and moves among them freely, basing its judgements on: 1) The welfare of self and others, 2) Rules, laws, and the fairness principle, and 3) A consideration of notice and intentions. The typical essay, however did not base moral judgements on abstract, universal principles (as in the highest level of the scale).

There are four sets of scales in the Stylistic dimension: 1) Syntax, 2) Organization, 3) Cohesion, and 4) Effectiveness. Anderson found the typical essay displays some variation in sentence length, structure and mood, but the variation seems accidental, not purposeful. Organization is moderately complex, but parts are not always clearly related to the whole nor sufficiently elaborated. Cohesion is maintained by all but the most sophisticated devices (parallelism, assonance, etc.). In general, the discursive style is attempted but not firmly established.

4. Sternglass, Marilyn S. "Applications of the Wilkinson Model of Writing Maturity to College Writing," College Composition and Communications, 1982, 29-37.
5. Anderson, James E. "An Assessment of Student Writing in the Advanced College Project", Indiana University English Department, 1984.

Of the 328 essays analyzed the 38 essays that were written by the university students, displayed the same general writing characteristics that were found in the essays written by the ACP students.

Anderson's findings are based on only two writing samples per student, both written on the same task and under "test conditions". In contrast, Wilkinson's research group examined four writing samples per student, written on a variety of tasks and under normal instructional conditions. Obviously, the inferences that can be drawn about the actual abilities of ACP writers are severely limited by the problems inherent in the collection of the writing sample. What was learned, however, is that the Wilkinson Model can be used for a descriptive analysis of this level of student writing. Three factors will influence future ACP/IU assessments:

1) The changes in the collection of writing samples for the 1984-85 school year,

2) The experience of having used a holistic (quantitative) assessment on one set of students' writing (1982-83), and

3) This past year's experience of completing a descriptive (qualitative) analysis on another set of students writings.

It is believed that the new writing samples will provide more valid indicators of the students' exit level writing performance. A combination of both descriptive and holistic assessment methods may be utilized to obtain a more complete picture of the students' writing ability from both quantitative and qualitative perspectives.

ACP/IUB Comparability Assessment: Math M215, Analytic Geometry and Calculus I

Background - While there were 3 ACP math courses offered during the 1983-84 school year, Math M215, Analytic Geometry and Calculus I, was the most widely adopted math course. Math M215 was taught in 15 high schools with a total ACP enrollment of 85 students. Both Math M119, Brief Survey of Calculus and Math M216, Analytic Geometry and Calculus II, were each taught in one high school with 4 students enrolling in Math M119 and only 1 student enrolling in Math M216. Because of the small enrollments in Math M119 and Math M216 courses, these evaluation findings pertain to the implementation of Math M215.

Student Performance on Math M215 Final Exam - The identical final exam was administered to the ACP students who took Math M215 in the high schools and to the IUB students enrolled in Math M215 during the fall semester of 1983-84. The final exam contained 12 problems and were hand-scored for both groups of students. Each ACP teacher received a scoring key with instructions on how to give partial credit for specific items. The same scoring key was used to grade the exams of the IUB students.

How did the ACP students performance compare to the IUB freshman students taking Math M215 at the IU Bloomington campus? The findings shown in Table 13 indicate that there was little variation between the mean test scores of the two groups of students with the mean score of the ACP students being slightly higher.

TABLE 13

Math M215 Final Comparisons of ACP and IUB Students

	Mean Score	N
ACP Students	138.75	80*
IUB Students	137.28	696
*Missing 4 ACP final exams.		

In Table 14, the frequency distribution of the Math M215 final exam scores are compared for the the ACP and the IUB students. In contrasting the results, the ACP students performances is again quite consistent with the IUB students. Thirty four percent of both the ACP and IUB students had scores above 160, while 40% of the ACP students and 42% of the IUB students had scores between 110 and 160. Twenty six percent of the ACP students had scores below 110 as did 24% of the IUB students.

TABLE 14

Distribution of Final Exam Scores of ACP and IUB Students

Final Exam Score	ACP Student N	ACP Student %	IUB Student N	IUB Student %
200 - 181	11	14	112	16
180 - 161	16	20	127	18
160 - 111	32	40	279	42
110 - 81	16	20	101	14
80 - 0	5	6	77	10
Total	80	100%	696	100%

The ACP math teachers were asked to complete a brief questionnaire entitled ACP "Final Exam Administration". Eleven of the 12 ACP teachers returned the questionnaire. The math teachers were asked to record when and how the IU final math exam was administered in the high school. Because of the typical high school class schedules, the teachers needed to make special arrangements to administer the final exam within a 2 hour time period. All but one ACP teacher administered the final exam in one 2 hour time block. This one teacher administered the exam in multiple sessions over 2 school days. Of those who administered the exam in a 2 hour time block, 8 teachers gave the exam in 2 consecutive class periods during normal school hours while 2 teachers administered the final exam to the ACP students outside of normal school hours (i.e. after school N=1) and on Saturday A.M., (N=1).

The ACP math teachers were also asked, "to what extent do you feel the final exam was representative of the course content you emphasized during the semester?" All ACP math teachers (N=1) stated that the IU final exam was "very representative" in that "100% to 90% of the final exam's items were covered in our class".

One discrepancy was discovered between the IU policy for test administration

and the policy in some high schools concerning the use of calculators during test administration. At IU, students are allowed to use calculators. The mean class final exam scores for those ACP classes using a calculator were 168.2, 143.6, 138.9, 139.2, 124.0 and 121.25 while the mean class score for those not using a calculator were 187.0 (N=1), 163.1, 131.7, 126.6 and 93.9. The Indiana University Math M215 final exam is designed so that using a calculator will not be a significant help to the students, but provide them some security.

All ACP teachers were asked to base 30% of each students final grade in Math M215 upon his/her performance on the Math M215 IU final exam. Of the 11 teachers, 4 reported giving the IU final exam 30%, 3 gave it 25% weight, 3 gave it 20% weight, and one teacher indicated that he did not use the IU final exam as any percentage of the student's final grade in the course.

How did the ACP student's grades compare to the IUB students in Math M215? The average final course grade given to the ACP Math M215 students (N=80) was 2.95 (based upon a 4 point system) while the average course grade for the IUB students was 2.16 (N=696). While the IUB students' final grade was based upon 3 mid-terms and a final exam, most ACP teachers administered 9 chapter exams in addition to the IU final exam. In addition, because of the smaller class sizes many of the ACP teachers were able to administer and grade quizzes and consequently each had an opportunity to "get to know" each of his/her students better than the university faculty. These factors along with greater individualization of class work in the high school due to smaller class size may account for some of the variability in the final Math M215 course grades.

IU/ACP Comparability Assessment: Chemistry C105 Principle of Chemistry

Although the same final exam was given to the Chemistry C105 students on campus and to students in the ACP programs, problems discovered after the administration of the exam made it difficult to use the final exam as a valid source for comparison. The Chemistry C105 teachers were asked to complete a short questionnaire, ACP Final Exam Administration, to determine how the exam was administered and to assess the teachers' perceptions of the exam. Only one teacher felt the exam was representative of the content covered in the Chemistry C105 class syllabus, while 5 teachers felt it was somewhat representative with 89-75% of the final exam's items related to the Chemistry C105 course content that was emphasized. Two teachers, however, felt the exam was **not** representative with less than 75% of the items related to the course syllabus.

Two teachers commented:

> *I was disappointed that this final exam covered such limited material, I spent a considerable amount of time on a number of areas that were either omitted or given limited attention. For example, the gas laws, heats of vaporization and fusion, Lewis structures and stoichiometry were a few such areas.
>
> *I feel the exam was geared very much to what must have been discussed in classes at IU. We had no way of knowing those special situations and in my case I covered many things that were not on the exam.

Another teacher complained the final exam was not comprehensive over the semester's course content, while another mentioned that some of the test items

were more appropriate for the Chemistry C106/C126 course syllabus than for Chemistry C105/C125. In addition, two teachers made modifications of the test items: One teacher edited the exam and modified several items while another teacher omitted 6 items from the 40 item exam.

It should be noted that in the high school environment, it is difficult for teachers to schedule a 2-hour time period to administer the final exam. While 4 of the 8 teachers administered the exam in 2 consequent class periods, one of these teachers indicated that the class period was 50 minutes so that students were rushed and did not have the full 2 hours. The other 4 ACP teachers administered the exam in 2 separate class periods over a 2 day period.

Given that there were these discrepancies in the course's content and testing procedures, the IUB students mean score on the IU Chemistry C105 final was 24.78 (N=490) while the ACP students mean score was 20.1 (N=61) with a standard deviation of 4.54. The ACP students' class means were 18.2, 18.7, 19.2, 21.0, 21.4, 21.7, 24, and 27.7.

Because of the test content and administration problems, the IU Chemistry final exam cannot be used to make a valid comparison between the two groups, ACP students and IUB students. Changes to improve the assessment procedures for the 1984-85 school year have been made so that valid comparisons can be made.

Teacher Perceptions: English W131, Elementary Composition

Background - These comments from ACP English teachers were synthesized from either a teacher interview conducted by the ACP evaluator or taken from questionnaires completed by the ACP English teachers. Teachers (N=6) who were in the Project for the first year were interviewed. Teachers (N=5) who were in the Project for 2 years were asked to complete a questionnaire. The questions asked in both formats were identical for the most part.

Findings - All ACP English teachers were either "very satisfied" (36%, N=4) or "somewhat satisfied" (63%, N=7) with the W131 Elementary Composition course that they taught. Aspects of the course which teachers felt they were most satisfied with included:

1) The process approach of composition used in the course, the structured approach to writing;

2) The writing assignments were a challenge for the students;

3) The students' enthusiasm to try to improve their writing;

4) The improvement in the students' writing; and

5) The concepts taught by the course, it teaches them to work independently, teaches them to think.

One teacher expressed the viewpoints of several teachers when she said:

> I enjoyed this course more than I have done in years. It came at a time when I needed something different, most satisfied with the development that the kids made over the semester, I don't know if the pre-test or post-test will show it, but they developed so much in independent thinking. Learned better to think for them-

selves, accept responsibility to identify own topic ideas. Better at seeing relationships and developing a thesis statement. They are so much better in their thinking skills.

Aspects of the course that teachers mentioned that they were not satisfied with included:

1) The post-test writing assignments (N=4), the fact that students did not want to write on the same topic as the pre-test;

2) The overall lack of variety of the topics for students to write on, too much repetition, too much focus on occupations (N=3);

3) Class size, there were too many students in the class (N=3);

4) Having both ACP and non-ACP students in the same class (N=3) and

5) Some students did not "rise to the occasion" because it was a college course but performed like high school students.

The teachers expressed a range of feelings toward the course's textbook, Reading, Writing and Reasoning, by Dr. Marilyn Sternglass. Most teachers felt that the textbook readings needed to be supplemented with other types of reading assignments. All teachers, however stated that they were very satisfied with the process approach used to teach composition that was presented in the text.

The teachers were asked whether they had experienced any benefits from being involved in the Project. Of the 11 teachers, six reported affirmatively. Some of the benefits they described were:

1) Professional rejuvenation of adding something new to an old approach. (N=3)

2) Enjoyed the interaction between the Indiana University faculty and the high school faculty. (N=2)

3) Benefited from just teaching the writing method suggested by Marilyn. I found the new approach a challenge because it is new to me and I wanted it to work for the kids.

4) Benefited in being able to see students grow in their approach to writing.

Three teachers questioned whether or not they benefited because of the large class sizes and the extra class preparations that they had to do each day. One teacher commented:

> I felt that I probably slighted preparation for the other two courses that I taught (both new preparations for me this year) in order to keep up with the paper work in the senior classes. I felt guilty that I was not able to give as much individual feedback because of the large class size.

All ACP W131 English teachers felt that they had been adequately prepared to teach the W131 course by the Indiana University faculty and no teacher felt that she/he needed closer interaction with the Indiana University English faculty during the school year. All ACP English teachers received a site-

visit by an Indiana University faculty member. If it was their first year in the Project, they attended 3 seminars during the year but, attended only one seminar if they had previously taught the W131 English course.

Teacher Perceptions: Math M215, Analytic Geometry and Calculus"

Background - During the 1983-84 school year, Math M215 was taught at 11 high schools. Of these, 10 high schools were new to the project and were offering the ACP Math M215 for college credit for the first time. The 10 new ACP math teachers were interviewed after they had taught Math M215 in order to identify what problems or concerns, if any, may have surfaced during the semester that they taught Math M215.

Findings - Most Math ACP teachers were "very satisfied" (80%, N=8) with the ACP course that they taught while 2 teachers indicated that they were "somewhat satisfied". Most teachers (N=8) stated that they were satisfied with Math M215 because it was very similar in content to the advanced calculus course that they had been teaching in the high school. While they may have needed to change the sequence of the topics in the class, the content covered was the same. In addition, many teachers reported that they also covered topics that were included in Math M216, the next sequenced calculus course. When asked if there was any aspects of the course that they were not satisfied with, 7 teachers could not identify any areas that they were unsatisfied with. A few concerns that were expressed are related to the Indiana University final exam. These included:

1) That the grading scale for the Indiana University final exam was higher compared to other years,

2) It was difficult to schedule the 2 hour final exam period, and

3) Having the final exam "hanging over us" at the end of the school year (May), it was "dreaded" by the students.

The Indiana University final exam that was administered was perceived to be somewhat easier than other Math M215 exams, therefore, accounting for the higher grading scale. Most teachers were able to schedule a 2-hour time block during school hours to administer the exam and only two teachers of the 10 taught Math M215 during the second semester.

The Math M215 classes were using one of 4 calculus textbooks approved by the Indiana University math department. All teachers indicated that they were pleased with the textbooks that they were using. A few teachers used material from several other textbooks to supplement their teaching.

Of the 10 new ACP math teachers, 7 teachers indicated that they personally benefited from their involvement in the Project. The main benefits teachers expressed were having had the opportunity to get to know the Indiana University math faculty personally and having had a change to interact with other high school teachers who teach calculus. One teacher stated, "this high school's math department and Indiana University's math department got to know each other. The Project helped us to see that we are teaching the right things in calculus". Only 2 teachers mentioned having experienced any implementation problems. These were:

1) Scheduling 2-hours for a final exam and
2) Having to do a little extra paper-work for the students enrolled for college credit.

ll new ACP math teachers felt that they were adequately prepared to teach he course in terms of the workshops and sessions provided by the Indiana niversity math faculty. Only one teacher felt that he could benefit from loser interaction with the math department. He recommended that the ACP ath teachers be invited back to campus to observe a M215 calculus class. ost teachers (70%) felt that they would benefit from returning to campus nce a year for a follow-up ACP meeting. At these meetings teachers could:

1) Share ideas and problems,
2) Talk about changes in syllabus,
3) Promote the use of microcomputers in the teaching of calculus,
4) Share specialized applications for calculus,
5) Sponsor a workshop in one topic area,
6) Discuss Indiana University mid-terms and final exams, and
7) Cover tactics and methods.

eacher Perceptions: Chemistry C105, Principles of Chemistry

ackground - Chemistry C105, Principles of Chemistry and its companion lab ourse, Chemistry C125, Experimental Chemistry was taught in 8 high schools uring the 1983-84 school year. Of the 8 teachers, 7 were new to ACP and ere teaching the C105/C125 for the first time in their high school. These 7 eachers were interviewed after they taught the ACP course.

indings - Of the 7 new ACP Chemistry teachers, 4 were "very satisfied" and 3 ere "somewhat satisfied" with the ACP course that they taught. Aspects of he course that teachers described they were satisfied with included:

1) The lab exercises, "it's the best lab manual I have ever seen or used." (N=2)

2) Didn't need to make many changes from the advanced chemistry course that I taught before. (N=4)

3) The latitude given by the Indiana University faculty to teach the course.

4) Students received better academic content, "taught more chemistry than I did the year before."

5) Quickness to which the kids could catch on. Pleased with syllabus development.

6) Students showed more academic maturity and performance in laboratory. Class size enabled individual work.

reas in the course that teachers mentioned that they were not satisfied with ncluded:

1) A lack of some equipment in the labs;

2) Concern about the Indiana University final exam for Chemistry C105, it was not representative of the course's content,

3) Did not receive an instructor's manual for the lab and had to experiment with creating the "standard solutions."

4) Problems in the management of the labs, many more labs completed this semester.

5) Too many labs, some should be compressed.

6) Pushed several students too hard, turned them off to chemistry.

7) First time taught advanced chemistry, not as comfortable with course as will be the next time I teach it.

In terms of teaching the course, no teacher felt there were content areas that needed to have greater emphasis in the curriculum than what was presently covered by the syllabus. All but one teacher was satisfied with the chemistry textbook that they used for the course. All textbooks were approved by the Indiana University chemistry department. The one teacher who wasn't satisfied hoped the high school would be able to switch to the same textbook used at Indiana University.
All new ACP Chemistry teachers felt that they personally benefited from their involvement in this Project. Some of the reasons that they gave included:

1) Although it is more work, it provides me with extra incentive to stay current and on top in the field.

2) Sharing of ideas between Indiana University faculty and high school teachers. (N=3)

3) Challenge to learn a new way to set up labs. I got a chance to use some of the labs that I haven't used for awhile. Also got to use a spectrometer.

4) Got to meet other chemistry teachers in the state and to share common problems. (N=2)

5) I learned a lot more chemistry. It was like a refresher course.

6) As a result of me teaching this course, I can now improve the beginning chemistry courses because I now know what to emphasize.

7) Confident that I'm doing things that I always thought should be in the course.

When asked whether they encountered any major implementation problems, 5 of the 7 teachers reported having experienced some type of problem. These problems ranged from not having enough lab equipment (N=2) to not having enough time to prepare for the chemistry labs (N=3). Because of differences in the college and high school lab time schedules, the ACP chemistry teachers needed to modify a 2 hour Indiana University lab to fit into 2 lab periods over 2 consecutive days. One school resolved the problem by having chemistry meet during the first period and then, on lab days, students were asked to come to school at 7:30 a.m. for a 2 hour lab period. At another school, students had the option of taking extra labs during the evening after school hours. Both of these solutions required that teachers spend extra time outside of their normal teaching schedules to be with the students.

Since this was a new or modified course, one teacher complained about the extra amount of time it took to prepare to teach this course and that this course was only 1/3 of his teaching load. Hopefully, he commented, that it will get easier next year.

All new ACP chemistry teachers stated that they had been adequately prepared

to teach the chemistry course and the lab course from the summer session provided by the Indiana University chemistry faculty. Three of the seven teachers felt that they would have benefited from close interaction with the Indiana University faculty. Two teachers commented that they were disappointed that the planned Indiana University faculty site-visit to their schools were cancelled. Both teachers commented that the students were looking forward to a visit from the Indiana University faculty members. Another teacher felt that additional inservice via advanced chemistry courses, Indiana University faculty lectures, etc. would be useful and inquired whether anyone was looking into NSF grants to help finance ACP teacher educational expenses. Most teachers, 5 of 7, felt that it would be useful to return to campus each year for an ACP chemistry meeting. Areas that teachers suggested that should be covered at these meetings included:

1) Advance lectures,
2) Meet with the faculty member that teaches C105 on campus.
3) New textbook adoption.
4) Sharing of ideas, content matter.
5) Emphasize changes in laboratory and course content.
6) Indiana University exams and grading policy.

Teacher Perceptions: Trends Across the ACP Courses

The ACP teachers in each of the courses, were asked identical questions which related to their participation in the Project. Most teachers (66%, N=19) indicated that they were "very glad to be a part of the Project" while (28%, N=8) indicated that they were "somewhat glad". Only one chemistry teacher stated that he was "a little sorry that he was involved in the Project". The teacher responses by course area are presented in Table 15.

TABLE 15

How satisfied are you with your participation in the Project?

	ENGLISH N	MATH N	CHEM N	TOTAL N	TOTAL %
Very glad to be part of the Project	8	5	6	19	66
Somewhat glad	3	4	1	8	28
A little sorry that I am involved	0	0	1	1	3
Very sorry that I am involved	0	0	0	0	0
Neutral	-	1	-	1	3
TOTAL	11	10	8	29	100

Most teachers (90%, N=26) felt that the course was appropriate for the high school students who were enrolled. Two English teachers felt that it was appropriate for about 1/2 of their class. These teachers taught classes with mixed ACP and non-ACP student enrollment. Those students not taking the course for college credit received senior year English credit. These students, however, did not take the course as seriously as those enrolled for college credit. Only one math teacher felt that some of her students did not possess the maturity to take the course for college credit. These results by course area are depicted in Table 16.

TABLE 16

Do you feel this course was appropriate for the high school students who were enrolled?

	ENGLISH N	MATH N	CHEM N	TOTAL N	%
Yes	9	9	8	26	90
About half of the class	2	0	0	2	7
No	0	1	0	1	3
TOTAL	11	10	8	29	100

Teachers were asked to describe the major benefits they perceive the project having on participating high school students.

Some of their comments are listed:

English teachers

*Gave students a better idea of what college would be like.
*Provided a timing dose of self confidence which many of them need.
*The students get college credit at a reduced tuition rate and are able to save money.
*Improved writing skills, gained additional confidence in writing.
*The students find out what is expected of them in college courses; the ability and expectation to think independently.

Math teachers

*All 5 ACP students are now finished with the math requirement for their intended college program. Only 1 student plans to take more math. It puts him one semester ahead.
*For the intended business-major, it eases them into calculus and they are rid of the calculus requirement. For other students, it gives them a head start.
*For those students who plan to attend Indiana University or for those who have difficulty with math, it is ideal. (The top math students can usually test out of first semester college calculus and therefore, do not need to enroll for college credit.)

Chemistry teachers

*Primarily, the students don't have to duplicate the work at college. Keeps them on task.
*Going to get them started in their college education on a positive note. Should be aware they can be successful at a college level course.
*It gave them a chance to do college labs as well as find out what it's like to have this content crowded into one semester. They became more aware of the time factor.
*Reaching academic maturity faster. Students will gain experience for when they are university students.
*Students gain confidence in their ability to handle college credit. Gives them a preview of things to come.

When asked what do they perceive as major disadvantages for high school students who participate in the Project, many teachers could not identify any disadvantages. Some teachers, however, related hypothetical problems that could confront some students. These are listed by course area.

English teachers

*This disadvantage does not outweigh the Project's advantages. For some students, the course is a lot of work with their high school courses (advanced chemistry, etc.) and with their extra curricular activities.

*Don't perceive any disadvantages, unless there is a problem with transferring the Indiana University credits. Don't expect there to be.

*No disadvantages, except if a student were to fail the course.

Math teachers

*For students getting an A in Math M215, they wasted their tuition money because they could have tested out of the course.

*For the student who is going into a program that requires a lot of math (i.e. engineering) and is a C student, he would be better off to take the calculus course in high school and then repeat it in college in order to get a better background in the subject. He is going to use it as a tool in the engineering courses.

*Disadvantage for those students who do not make a high enough grade to transfer to another university.

*Students may find it hard to take the next calculus course M216 as their first math course with all the other adjustments they need to make in college. They need to make the social adjustment to college the first semester. Taking M215 over helps to build confidencein the first year of college. Those students who tested out of M215 in the past, had problems in M216 as a first year course.

*For students who receive a low grade, it could be a disadvantage because they will be working up-hill against a bad GPA.

*For some of them who take M215 in the high school, it is a disservice to them when they take the second semester of calculus. In the high school atmosphere, the pace is slower. In college, they will be "blown out of the water". I wonder whether it is better to have them "blown out of the water" the first semester instead of the second semester.

Chemistry teachers

*Problem if the credit hours will not transfer.

*Disadvantage for students who receive a bad grade.

*It's more work for students here than at Indiana University. We cover both C105 content and emphasize problem solving exercises. Advantage for pre-med students to take it again to get a better background in chemistry.

All teachers were asked if the adoption of this Project caused any internal problems in the high school of which we should be aware. Most teachers (86%, N=25) indicated that it had not. Two English teachers complained about large class size (+30) and that both ACP and non-ACP students were scheduled in the same classroom. Two math teachers mentionad problems in finding a 2-hour block to schedule the Indiana University final exam while none of the chemistry teachers identified any problems.

Most teachers (93%, N=27) indicated that they had no problems understanding or implementing any of the Advance College Project policies. One English teacher mentioned she discovered that one student whom the ACP rejected for enrollment due to a low SAT test score was later accepted by Indiana University admissions office for the next school year. This problem later resolved when the ACP staff met with Indiana University admissions and learned there had been some modifications in the criteria they used for student acceptance to the university. In that, greater emphasis is currently being placed on class rank, and an analysis of the types of academic courses taken in high school for preparation for college rather than making a decision based on the previous SAT test cut-off score. While the SAT test score is still one criterion, it is not the primary criterion used for student admission.

One chemistry teacher had a question about whether ACP students could be juniors. At the seminar on campus, the teachers were told ACP courses were for seniors, but it was later learned that exceptions can be made for some junior level students.

In terms of the relationship between the ACP high school teachers and the Indiana University faculty, most teachers (72%, N=21) felt that the Indiana University site-visits are indeed useful while only 7 ACP teachers (24%) did not. These findings by course area are displayed in Table 17.

TABLE 17

Do you feel the Indiana University faculty site-visits are useful?

	ENGLISH N	MATH N	CHEM N	TOTAL N	TOTAL %
Yes	8	6	7	21	72
No	2	4	1	7	24
Uncertain	1			1	4
TOTAL	11	10	8	29	100

When asked, "what purpose(s) should the Indiana University faculty site-visits serve", the ACP teachers offered these suggestions:

English teachers

*To talk with the students, to see how things are going.

*For the teacher, it is good for moral support. For the students the visit makes the experience very real. Having someone visit from Bloomington, gave it more of a sense of being a college class. There was a change for the better in class attitude after the visit.

*They can see what we are doing and answer questions that we have. Some of the faculty may not have been in a high school for a long time. They can become more aware of the high school environment and atmosphere.

*It's useful for the class to be able to ask questions to a real professor. It has more meaning coming from a faculty member. It helps if the faculty member identifies any weakness in the classroom. (He/she can) make sure I'm getting the message across.

*Students like to see what "live" profs look like. The prof could answer questions about college classes, etc.

*Unity, sharing problems, keeping our goals the same.
*During the first year, the faculty visit should be to help the instructor with any doubts, problems, etc., that have arisen. The visit should be made within 6 weeks of the beginning school.
*Touch base, good for college professors to spend a day in high school. Teaching in high school is qualitatively different than at a university.
*Public relations.

Math teachers

*Talking about how to grade the final exam and for the faculty to find out what's going on. The students had a professor here. They saw physical evidence that the Project mentioned.
*The main emphasis might be on observing new teachers. Also, the visits could be to provide help on a revisit basis from the individual teachers.
*They should see if the teachers can teach calculus.
*Observe class being taught. Go over how to grade the Indiana University final. Have a discussion period.
*Look at the class from the content area. Specific questions about teaching methods. Solutions to difficult problems. The kids were looking forward to seeing the Indiana University faculty members. Would have looked up to a professor. (Did not receive site-visit.)
*Provide consistency in program, observe the teachers, and talk with the teachers in their environment.
*Public relations, to show the students that Indiana University cares.
*Awareness of what occurs in high school situation. Students must know that they can interact with faculty person. Also can talk to math department chairperson.
*Helpful to get faculty input on problems. The visit should be a sharing of ideas and problems.

Chemistry teachers

*Want reassurance that we are doing the right things for the students. They should gain a familiarity with the school layout (laboratory) so that they know what we're talking about. Also to familiarize the Indiana University faculty with the problems that we have in the classroom, they can see our level of teaching.
*Interaction between Indiana University faculty and students is important. Interchange between Indiana University faculty and high school students the best that could happen. It has positive pay-offs for students.
*They should come to the labs and observe the lab exercises. See if we are doing what they think we should be doing.
*Not to criticize the students. Put a bad feeling in the students toward the Project. Generally high school teachers are protective toward their students.
*Interacting with students. Students get exposure to college professors and feel that they are interested in what they are doing.
*To spend time one on one with teacher in conference.
*Communication of course content and laboratory.
*The site-visit should occur during the semester when the college course is being taught in the high school.
*Might be good to have a short guest lecture to talk to the students. It could be a motivation devise for students.

All teachers were asked whether they were satisfied with the existing relationship between the high school and the university program. Ninety percent (N=26) of the teachers indicated that they were "very satisfied' and 3 teachers (10%) indicated that they were "somewhat satisfied". None of the teachers indicated that they were not satisfied with the university and high school relationship. This finding by course area are shown in Table 18.

TABLE 18

How satisfied are you with the existing relationship between the high school and university program?

	ENGLISH N	MATH N	CHEM N	TOTAL N	%
Very satisfied	11	9	6	26	90
Somewhat satisfied		1	2	3	10
Not at all satisfied					
TOTAL	11	10	8	29	100

TRANSFERABILITY OF ACP/IU CREDITS

Background - An initial concern of the Project was whether other universities would accept the ACP credit hours. Since the Advanced College Project is modeled after Syracuse University's Project Advance, it was expected that as in the case of Syracuse University, most colleges and universities would accept the credits. Those universities which do not were usually classified as being exclusive private schools. Of prime importance to the Project was whether or not the students who were enrolled in the 1982-1983 pilot year of the Project had trouble transferring their ACP credit. A follow-up study was conducted to answer this concern.

Methodology of Study - A mail survey was went to 263 former ACP students in December of 1983. A total of 113 surveys (43%) were returned. A second mailing was sent to the non-respondents in May 1984. Of these, only 30 surveys were returned which increased the response rate to 54% Of prime concern was to contact those students who had enrolled at a college or university other than Indiana University in order to determine whether they were able to transfer the ACP credits. Consequently, the names of the 120 non-respondents were compared to those listed in Indiana University's registration. Of the 120 students, 62 had completed their freshman year at Indiana University. Telephone interviews were developed to contact the remaining 58 students who were still unaccounted. Of the 58, 37 students were interviewed by telephone.

ACP Credit Transfer - To date, we know at which college 92% (N=242) of the 1982-1983 ACP students spent their freshman year. Fifty-three percent (N=140) attended IUB while another 15% (N=41) attended another Indiana state university. Of the remaining students, 9% (N=24) attended a private in-state institution: 3% (N=8) were enrolled in an out-state public institution; 8% (N=22) attended an out-state private institution; 4 students became affiliated with the military; and 3 students did not attend college. These results are depicted in Table 19 as well as whether the students were able to

transfer their ACP credits.

TABLE 19

Transferability of ACP credits: 1982-1983 Pilot-Year Enrollment

University	Students Enrolled		Transferred Credit			
			Yes		No	
	N	%	N	%	N	%
Indiana University*	147	56	146	62	1	.5
Other State University	34	13	29	12	5	2.0
Private In-State	24	9	16	7	8	3.5
Public Out-State	8	3	4	2	4	2.0
Private Out-State	22	8	13	6	9	4.0
Subtotal	235	89	208	89	27	11.0
Other						
Military	4	2	X	X	X	X
Did Not Attend Univ.	3	1	X	X	X	X
No Response	21	8	X	X	X	X
Total	263	100	X	X	X	X

*Includes IU Bloomington and other IU regional campuses.

Of the 242 students accounted for, 27 students (11%) did not transfer their ACP credits. Of these, 12 students indicated that the university would not accept the credits while 6 students were not able to transfer due to low grades. Two students decided to repeat the same course while 3 students reported that they did not know how to transfer their credits.

Four students gave other reasons which included testing out of a class (N=2), being exempted due to high SAT test scores, and that composition was not a required course at that particular university.

Summary - Of the 92% ACP students (N=242) that we were able to track, 89% (N=208) were able to transfer the ACP/IU credits without any problems while 27 students (11%) did not transfer the credit for various reasons. Of the 27 students, only 12 students (5%) indicated that the reason was due to the other university not accepting the credits. Consequently, most students were able to transfer the ACP/IU credits to the college of their choice unless the grade they received in the course was too low or if they themselves chose not to transfer the credits.

Overall Project Summary

Looking across the student and teacher data, it becomes evident that the positive feelings toward the Project and the specific ACP courses outweigh any problems or concerns that may have emerged. Ninety percent (N=364) of the students recommended that other high students should be allowed to continue to take ACP courses in the future. Eighty percent (N=332) of the students, felt that as a result of having taken the ACP course, they have acquired new skills that will be useful in college. These students, who indicated that they are looking forward to attending college, have received a head start in their future academic careers. This head start and having learned what is expected in a college course, provided many of the students with an increased awareness of their ability to be successful in college.

While taking college courses in the high school has many advantages, these benefits are diminished if the students are not able to transfer their ACP/IU credit hours to the college or university that they plan to attend. Recognizing the importance of student follow-up to assess credit transferability, a follow-up study was conducted with the 1982-1983 ACP enrollees. Of the 242 students accounted for, only 12 students (5%) reported that the university they attended did not accept their ACP course credit. While most universities will accept the ACP credits, those that do not are often elite, eastern private schools.

The ACP office is compiling an ever growing list of universities who have accepted the ACP credits and those that have not. This information has been shared with high school counselors and ACP teachers so that students who enroll in an ACP course can pre-determine if the university they plan to attend will accept the credits. With additional follow-up studies and improved counseling, it is hoped that eventually no student will enroll in an ACP course without being certain of credit transferability. Interestingly, of the 403 students who completed an ACP Student Questionnaire during the 1983-1984 school year, 22% (N=87) of the students indicated that they were not certain of which university they planned to attend. While this percentage may seem high, many of the students completed the questionnaire at the end of the first semester with some time left in their senior year to decide. While students may not have decided upon the university they will attend, they have usually narrowed their alternatives to 2 or 3 potential schools. Considering the potential schools students plan to attend, it is important that the high schools monitor whether those students who plan to enroll in an ACP course will have a reasonable chance of having their credit hours transfer.

Given that students do well in the ACP course(s) and that their credit hours transfer, participants in the Project had difficulty identifying Project disadvantages. Most ACP teachers, with the exception of 2 English teachers who were concerned about large composition class size, felt that the Project's benefits outweighed any concerns. Teachers reported that they benefited as well from their participation in the Project. These benefits included a sense of renewal, knowledge that they were "in track" in terms of what they had been teaching before, and the formation of new relationships with other high school teachers and the Indiana University faculty members.

In some schools, where there needed to be changes in either the school's curriculum or course's content, there appears to have been a "trickle down" effect, in that teachers have also modified the curriculum in the earlier grades. For example, some English teachers are incorporating the English W131 writing process approach in the 10th and 11th grade English courses. In addition, some chemistry teachers are upgrading the introductory chemistry courses.

Besides benefitting students, teachers and the high school's curriculum, the Indiana University faculty are also benefitting from the cooperative relationships between the high school and the university. They have become more aware of what it's like to teach their content area in the high school environment. They have also obtained a better understanding of the current range of student abilities which has given insights into how curriculum on campus can better meet the needs of the incoming freshman students. On the other hand, one anticipated outcome of the Project is that high school students will come to college better prepared academically.

The consensus, however, feels that real winners of the Project are the students. In addition to gaining college credit, confidence in their abilities and an understanding of what to expect in college, some students who participated in these ACP courses have stated in the follow-up studies that they felt they were better prepared to handle their first year of college than their friends who did not participate in the Project. With such positive student feedback, the impact of the Project on the students and their future academic work has been significant.

APPENDIX A

Advance College Project
Student Questionnaire 1983-84

Name _____ Social Security #_____

High School _____ Sex: Male _____ Female _____

Teacher _____ Date: _____

If enrolled in more than one ACP course this semester, "this course" refers to the course in which you received this survey.

Enrolled in which Advance College Project course?

_____ English W131
_____ Chemistry C105/C125
_____ Chemistry C106/C126
_____ Mathematics M119
_____ Mathematics M215
_____ Psychology P101

1. Which factor(s) influenced your decision to enroll in this Advance College Project course?

	Check no more than five (5) reasons.	Which influenced you the most? Prioritize from 1 to 5 with 1 = Highest and 5 = Lowest
_____	a. To see if I can do college work	_____
_____	b. Because of the course's cost, cheaper this year	_____
_____	c. To get a head start in college	_____
_____	d. To be challenged, stimulated	_____
_____	e. Course was recommended to me by teacher	_____
_____	f. Course was recommended to me by counselor	_____
_____	g. Course was recommended to me by a friend(s)	_____
_____	h. Parents influenced my decision	_____
_____	i. To learn what college course is like	_____
_____	j. Expected course to be more individualized in high school	_____
_____	k. To earn dual credit (high school/college)	_____
_____	l. Plan to attend Indiana University	_____
_____	m. Decided not to take advanced placement course	_____
_____	n. Other _____	_____

2. In retrospect, how do you feel now that you've taken this course? (check one)

_____ Very glad I took it.

_____ Somewhat glad I took it.

_____ A little sorry that I took it.

_____ Wish I hadn't taken it.

3. In terms of course difficulty, this course was:

_____ Easier than I thought it would be.

_____ About as easy/difficult as I expected.

_____ More difficult than I expected.

4. While taking this course, my study habits were:

_____ The same as before.

_____ Different, I needed to spend more time studying.

_____ Other, _____

5. At this time, do you now which college you plan to attend?

_____ Yes _____ Not Sure

If "yes", please name the college/university:

_____

Check one: _____ instate or _____ out-of-state institution

Check one: _____ public or _____ private institution

6. If you are not planning to attend Indiana University, do you plan to transfer the credits earned from this course?

_____ Yes _____ No _____ Not Sure

If "no" or "not sure", please explain.

7. a. Did enrolling in this course influence your decision about which college/university you will attend?

_____ Yes _____ No

If "yes", how?

b. Did enrolling in this course influence your decision about which major area you plan to pursue in college?

_____ Yes _____ No

If "yes", how?

c. If you had not taken this course, would you have graduated early from high school?

_____ Yes _____ No

8. To what extent do you agree or disagree with each of the following statements. Circle your response.

(SD Strongly Disagree (D) Disagree (NS) Not Sure (A) Agree (SA) Strongly Agree.

As a result of having taken this ACP course:	SD	D	NS	A	SA
a. My study habits and time management skills have improved.	1	2	3	4	5
b. I am looking forward to attending college.	1	2	3	4	5
c. College will be easier than I first expected.	1	2	3	4	5
d. I now feel uncertain of my ability to do college work.	1	2	3	4	5
e. I have gained new skills that will be useful in college.	1	2	3	4	5
f. I discovered I will have to work/study harder in college than I did in high school.	1	2	3	4	5
g. I feel other high school students should be able to take college courses while in high school.	1	2	3	4	5
h. I would recommend this ACP course to other high school students.	1	2	3	4	5

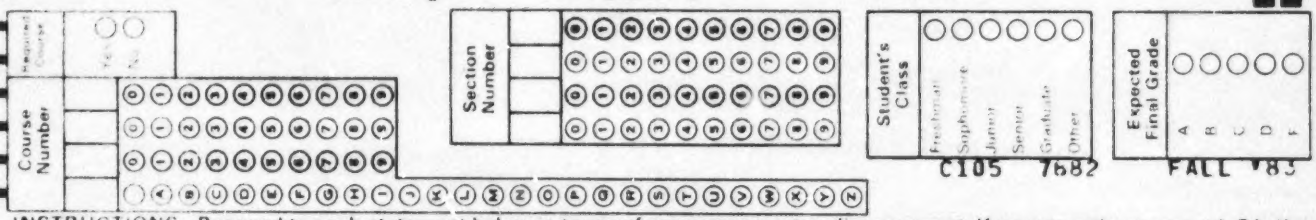
9. The most valuable aspect(s) of this course was:

10. The least valuable aspect(s) of this course was:

Please feel free to write other comments about this course or about the Advance College Project in the space below or on the back of this survey.

Thank you for your help in completing this survey.

Teaching APPENDIX B — Form C.



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INSTRUCTIONS Respond to each statement below in terms of your agreement or disagreement. If you strongly agree mark SA; if you agree but not strongly, mark A; mark U if undecided; D for disagree; SD for strongly disagree. For items requiring written responses, use reverse side of this sheet.

1	SA A U D SD	1 I LEARNED MORE IN THIS COURSE THAN I HAVE IN MOST OTHERS.
2		2 THIS COURSE IS WELL ORGANIZED.
3		3 MY INSTRUCTOR IS WELL PREPARED FOR CLASS MEETINGS.
4		4 MY INSTRUCTOR IS ABLE TO EXPLAIN THE SUBJECT CLEARLY.
5		5 MY INSTRUCTOR MAKES DIFFICULT TOPICS EASILY UNDERSTANDABLE.
6	SA A U D SD	6 MY INSTRUCTOR USES EXAMPLES AND ILLUSTRATIONS WELL.
7		7 MY INSTRUCTOR IS ENTHUSIASTIC ABOUT TEACHING THIS COURSE.
8		8 MY INSTRUCTOR MAKES THE SUBJECT INTERESTING.
9		9 MY INSTRUCTOR STIMULATES MY THINKING.
10		10 THIS COURSE MOTIVATES ME TO DO FURTHER INDEPENDENT STUDY.
11	SA A U D SD	11 STUDENTS PUT A LOT OF ENERGY INTO WHAT THEY DO IN THIS CLASS.
12		12 MY INSTRUCTOR KNOWS MORE ABOUT THE SUBJECT THAN IS IN THE TEXT.
13		13 MY INSTRUCTOR ACTIVELY HELPS STUDENTS WITH PROBLEMS.
14		14 MY INSTRUCTOR IS REGULARLY AVAILABLE FOR CONSULTATION.
15		15 MY INSTRUCTOR RECOGNIZES WHEN STUDENTS FAIL TO COMPREHEND.
16	SA A U D SD	16 MY LAB INSTRUCTOR CLEARLY EXPLAINS THE PROCEDURES TO BE USED.
17		17 MY LAB INSTRUCTOR PROVIDES SUFFICIENT HELP IN THE LAB.
18		18 DAILY CLASS ACTIVITIES ARE CLEARLY TIED TO COURSE OBJECTIVES.
19		19 I KNEW WHAT WAS EXPECTED OF ME IN THIS COURSE.
20		20 THIS COURSE WILL BE OF PRACTICAL BENEFIT TO ME.
21	SA A U D SD	21 COURSE ASSIGNMENTS ARE INTERESTING AND STIMULATING.
22		22 COMPLEXITY AND LENGTH OF COURSE ASSIGNMENTS ARE REASONABLE.
23		23 I AM PLEASED WITH THE TEXT REQUIRED FOR THIS COURSE.
24		24 THE EXAMS COVER THE MOST IMPORTANT ASPECTS OF THE COURSE.
25		25 EXAMS REQUIRE ORIGINAL THOUGHT.
26	SA A U D SD	26 MY INSTRUCTOR COLLECTS ENOUGH EVIDENCE FOR VALID GRADING.
27		27 MY INSTRUCTOR OFFERS SPECIFIC ADVICE TO REMEDY WEAKNESSES.
28		28 MY INSTRUCTOR MAKES ME FEEL FREE TO ASK QUESTIONS IN CLASS.
29		29 I LEARNED A LOT IN THIS COURSE.
30		30 I DEVELOPED THE ABILITY TO SOLVE ACTUAL PROBLEMS IN THIS FIELD.
31	SA A U D SD	31 I DEVELOPED CREATIVE ABILITY IN THIS COURSE.
32		32 I DEVELOPED A GREATER SENSE OF PERSONAL RESPONSIBILITY.
33		33 I DEVELOPED MORE CONFIDENCE IN MYSELF IN THIS COURSE.
34		34 THE LAB SESSIONS ARE WELL ORGANIZED.
35		35 THE LAB FACILITIES ARE ADEQUATE.

Comments may be written in the BOX on the REVERSE SIDE of this sheet. NCS Trans-Optic E 05-6544 19

(Faculty Evaluation is a service of the BUREAU OF EVALUATIVE STUDIES & TESTING, Indiana University)

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APPENDIX C

Advance College Project
Group II Teacher Interview (English W131)
1983-1984 School Year

Name of Teacher _____ High School _____

ACP Course Taught _____ Date of Interview _____

Number of Sections Taught _____

Number of Students in Each Section

Total Number	ACP Students	Non-ACP Students
_____	_____	_____
_____	_____	_____
_____	_____	_____

Section A: Teacher Perceptions of Course

1. How satisfied are you with the ACP course you taught this semester?

_____ Very satisfied _____ Somewhat satisfied

_____ Somewhat dissatisfied _____ Very dissatisfied

2a. What aspects of the course were you most satisfied with?

2b. What aspects of the course, if any, were you not satisfied with?

3a. How satisfied are you with using the existing course textbook for the English course?

3b. How satisfied are you with using the prescribed writing process approach for English W131 as presented during the summer English W131 seminar?

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4. To what extent is your W131 course based upon the Sternglass textbook vs. supplemental readings and materials? Indicate percentage so that they total 100%.

Sternglass textbook		Other readings/materials	
_____	+	_____	= 100%

Please describe the other supplemental materials used.

5a. Which classroom activities did you find were most successful?

5b. Which classroom activities did you find were least successful?

6a. In terms of course content, are there specific areas that you feel are over-emphasized in W131?

6b. Are there content areas which you feel need to have greater emphasis?

7. Did the teaching of this course pose any major implementation problems? If yes, describe.

8a. Did partial IU/ACP class enrollment within a class section create any particular implementation problems?

_____ Yes _____ No If Yes, please explain.

8b. If yes, how does your school plan to resolve them?

9. What have you learned from this semester's experience? What changes would you make the next time you teach this course?

Section B: Student Evaluation

10a. How many major writing assignments did you make over the semester? _____

Type of writing assignment	Length	Revision(s)

10b. About how many minor writing assignments did you make? _____

11. What criteria did you use to measure growth in student writing and assign grades?

12. Are you satisfied with the existing course criteria for evaluating student work and assigning grades?

_____ Yes _____ No If No, please explain.

13. Did you experience any problems when administering either the pre-test or post-test writing assignment for W131?

_____ Yes _____ No If Yes, please explain.

14. What were your students' attitudes toward taking the pre-test and post-test writing assignments? Did they take each seriously, less seriously, etc.?

Pre-test:

Post-test:

15a. What are your perceptions of using this pre-test/post-test assignment as a means to measure changes/growth in student writing?

15b. In addition to the holistic evaluation approach, what other ways could the Project use to evaluate the quality of and changes in the students' writing?

Section C: Impact of Course

16. Now that you've been involved in the ACP, how satisfied are you with your participation?

_____ Very glad I am part of the Project
_____ Somewhat glad to be part of the Project
_____ A little sorry that I am involved
_____ Very sorry that I am involved

Please explain why.

17. Have you personally benefited from your involvement in this Project?

_____ Yes _____ No Please explain.

18. Did teaching this course require you to modify your former teaching style?

_____ Yes _____ No

If Yes, do you perceive these changes as being positive or negative?

19. Do you feel this course was appropriate for the high school students who were enrolled? (Do you feel that the students who took the course for college credit possessed the necessary entry-level skills in terms of both academic ability and emotional maturity?)

20. Have you noticed any behavioral or attitudinal changes (positive or negative) on the part of your students that you can contribute to their enrollment in the ACP course? (changes in preparation, study habits)

21a. What do you perceive, if any, as being the Project's major benefits for participating high school students?

21b. What do you perceive, if any, as being the Project's major disadvantages for participating high school students?

22. What impact, if any, have you observed this Project having within your high school?

23. As a result of your school's offering this ACP course, have there been changes in your school's English department course offerings?

_____ Yes _____ No If Yes, please explain.

24. What perceptions/attitudes do other high school personnel have toward the Advance College Project? (Positive, negative, neutral, supportive, non-supportive)

Other high school teachers in your department:

High school teachers in your school:

School guidance counselors:

School administrators:

25. Has the adoption of this Project in your high school caused any internal problems of which we should be aware?

Section D: Project Administration

26. Do you feel you were adequately prepared to teach the course in terms of the workshops and sessions provided by the IU English faculty?

_____ Yes _____ No If No, please explain.

27. Would you have benefited from closer interaction with the IU English department?

_____ Yes _____ No If Yes, please explain.

28. What other information/topics, if any, should have been covered in more depth during the workshop sessions?

29. Would you like to see other teaching alternatives offered to W131 other than the current process approach?

_____ Yes _____ No _____ Depends on the alternative

Please explain.

30. Do you feel you and the other ACP teachers would benefit in returning to campus each summer or once a year for an ACP meeting?

_____ Yes _____ No

If Yes, what areas do you feel should be covered at that meeting?

31a. To what extent did this year's (semester's) enrollment in the ACP course meet your expectations?

_____ Enrollment was about as expected
_____ Enrollment was less than expected
_____ Enrollment was more than expected

31b. If enrollment was less or more, what do you feel accounted for the difference?

32a. What expectations do you have for future ACP enrollments in your particular course(s)?

32b. Are there any problems in your school concerning student enrollment?

33a. How are students told about and counseled to enroll in the ACP course?

33b. Is there anything that the ACP staff could do to help with next year's enrollment?

34. Were there any IU or Advance College Project policies that you had trouble implementing or understanding?

35a. How useable/readable did you find the registration handbook for the Advance College Project?

_____ Very useable/readable
_____ Somewhat useable/readable
_____ Not very useable/readable

35b. What modifications, if any, would you like to see made in the manual? (changes or additions)

36. Do you feel that the IU faculty site visits are useful?

_____ Yes _____ No Please explain.

37a. What purpose(s) do you feel that the IU faculty site visitations should serve?

37b. Are there any ways that the visits can be changed/modified so that they are most useful?

38a. How satisfied are you with the existing relationships between the high school and the University program?

_____ Very satisfied

_____ Somewhat satisfied

_____ Not at all satisfied

38b. Are there areas where you would like to see changes in existing relationships?

Are there any other concerns or other comments you would like to share concerning the Project?

APPENDIX D

Advance College Project
Final Exam Administration

Instructor _____ Course _____

High School _____

Please answer each of the following questions as they pertain to the administration of the IU/ACP final exam in your class.

1. How/when was the final exam administered?

   _____ In one session during normal school hours

   _____ In one session but not during normal school hours

   _____ In multiple sessions within one school day

   _____ In multiple sessions over several school days

   _____ Other Please describe _____

   _____

   If the test was administered during multiple sessions, how were the test items divided?

2. Specifically, on which date(s) and during what time period(s) was the final exam administered?

3. To what extent do you feel the final exam was representative of the course content you emphasized during the semester?

   _____ Very representative (100%-90% of the items' content was covered in our class)

   _____ Somewhat representative (89%-75% of items were covered)

   _____ Not very representative (Less than 75%)

4. On the attached final exam, please mark (X) the specific test items which you feel were not representative of the materials you covered in class.

5. Approximately what percentage of your students had access to a calculator during the exam?

_____ ACP enrolled _____ Non-ACP enrolled

6. Do you plan to include this final exam as part of each student's final grade in the course?

_____ No

_____ Yes

If Yes, what percentage will the exam contribute to the final grade? _____ percentage

7. Please describe any special conditions which pertain to the administration of the final exam. (For example, a fire drill in the middle of the exam)

8. Please describe any specific problems which relate to the specific items of the final exams. (For example, items you feel were inappropriate, ambiguous, or not understood by students)

Please feel free to write other comments.

Thank you for your feedback.